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LEGISLATIVE COUNCIL

OF

CEYLON.

1882—1883.

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PROCEEDINGS

OF THE

LEGISLATIVE COUNCIL.

Wednesday, 20th September, 1882.

PRESENT:

HIS EXCELLENCY SIR J. R. LONGDEN, K.C.M.G., President.

The Hon. JOHN DOUGLAS, C.M.G.,
The Hon. Major-General Sir J. C. McLEOD, K.C.B.,
The Hon. C. L. FERDINANDS,
The Hon. W. H. RAVENSCROFT,
The Hon. W. D. WRIGHT,
The Hon. A. BAILEY,
The Hon. J. F. DICKSON,
The Hon. J. STODDART,
The Hon. W. HALLILEY,
The Hon. J. VAN LANGENBERG,
The Hon. P. RÁMA-NÁTHAN,
The Hon. F. M. MACKWOOD,
The Hon. W. W. MITCHELL,
The Hon. A. L. DE ALWIS.

1. MEMBERS SWORN.—The necessary oaths were taken by the Hon. Major-General Sir J. C. McLeod, the Hon. C. L. Ferdinands, the Hon. A. Bailey, and the Hon. J. F. Dickson.

2. OPENING OF THE SESSION.—His Excellency the Governor opened the Session with the following Address:—

HONOURABLE GENTLEMEN OF THE LEGISLATIVE COUNCIL,

I HAVE much pleasure in opening the present Session of the Legislative Council, and placing before you several measures designed to improve the condition of the people, and to promote the public welfare.

FINANCES.

2. At a time when severe financial pressure is felt in every industry and in every rank of our community, financial questions assume the highest importance; and it is my first duty to bring under your notice the revenue and expenditure for the past year.

3. The revenue of 1881, thanks to the most successful Pearl Fishery on record for many years, exceeded the sum at which it had been estimated by Rs. 148,491. Without the aid of the large sum realized by the Pearl Fishery in excess of the estimate, the revenue would have fallen short of the estimate by Rs. 151,042. The Paddy Tax shows a deficiency of Rs. 164,237 as compared with the estimate. The Stamps were less than had been estimated by Rs. 172,937, and the Railway Receipts showed a decline of Rs. 323,910, and were actually less than the receipts of any previous year since 1874, notwithstanding that forty-six additional miles of railway have been opened during the seven intervening years. I shall have to advert to this again.

4. The fall in the revenue has now been continuous for five years, and, as compared with 1877, in which year the revenue attained its maximum, the fall amounts to Rs. 3,339,692.

5. This state of things has imposed on the Government as a paramount duty the immediate reduction of the expenditure, and this was accomplished by a diminution in the appropriation for public works, and in such other items of the public expenditure as permitted of immediate reduction. It will, however, be seen by the Council, on reference to the accounts, that in several branches of the expenditure, notably the Railway, there has been not only no reduction, but a considerable increase of expenditure, which was only permitted because it was unavoidable.

6. The nett result of the administration of the finances for 1881 was that there remained at the end of the year an excess of revenue over expenditure amounting to Rs. 153,232.

7. In comparing the revenues of the two past years, it will be noticed that the receipts of 1881 were less than those of 1880 by Rs. 162,625—equivalent to a fall of about 1½ per cent. on the whole revenue. On some items the fall was naturally much greater, and the prevailing depression was shown in a decrease of 20 per cent. in the important item of Land Sales. There was also a fall of 20 per cent. in the produce of the Crown Forests resulting from an unfavourable market for timber. In other branches of the revenue there was also a decline, but to a smaller extent. In the item Arrack Licenses, which take the place of an excise, the receipts were 5½ per cent. less than in 1880; on Grain Taxes there was the same loss, and in Customs Duties the fall was about 1¾ per cent.

8. The proportion of revenue raised by taxation to that received from other sources is, roughly speaking, about eight to five.

9. The total revenue raised by taxation in 1881 amounted to Rs. 8,320,197. This included Customs Duties, Paddy and Grain Taxes, Tolls, Licenses of all kinds, Stamps, Postage, Taxes, Fines and Judicial Fees of all kinds, the profits of the Salt Monopoly, and Arrears of Revenue. Divided over a population of two millions and three-quarters, this gives a Taxation Rate of three

rupees and two cents per head. To this is to be added the Road Commutation or Labour, both in towns and rural districts, which yielded last year a total sum of Rs. 661,074, being at the rate of 24 cents per head of the population, and raising the taxation rate to three rupees and twenty-six cents per head. As compared with other countries, this rate of taxation is very light; but nothing is more misleading than to compare the rate of taxation of different countries without considering also their ability to bear taxation. An annual rate of twenty rupees may be less felt and weigh less on the resources of the people in one country than a rate of three and a-quarter rupees on another. But after fully considering all the circumstances of Ceylon, I think it may be fairly stated that there are few countries in the world in which the taxation is so light in proportion to the means of the people.

10. The revenues from other sources than taxation amounted last year to a total of Rs. 5,366,294. This includes the Railway Receipts, the Pearl Fishery, the price of the Waste Lands sold, the produce of the Timber Sales, and all sums recovered as reimbursements, such as overpayments for army and other services.

11. The expenditure of 1881 reached a total of Rs. 13,533,259, showing a reduction of Rs. 731,231 on the expenditure of the previous year. The gross reductions amounted to double that sum, or Rs. 1,442,862; but there were incurred increased charges for interest on Railway Loans, and in the cost of the Administration of Justice; the failure of part of our local supply of salt necessitated additional expenditure in importing salt from India; and the taking of the Census was, of course, an extra charge. These additions amounted in the whole to Rs. 711,631, thereby reducing the nett saving on the whole expenditure of 1881, as compared with that of 1880, to Rs. 731,231.

12. The expenditure shown in the accounts includes, as the Council are aware, not only the cost of the administration of the Civil Government in all its branches, but also the Military subvention, and the sums expended by the Government in working the Railways, and in the care and management of the Crown Forests, the Salt Ponds, and the Pearl Fishery, the gross proceeds of which are carried to revenue. It also includes the interest of our debt. These external charges amount to a total of Rs. 4,195,889, composed of the following items:—

	Rs.
The Railway, including interest on railway loans	2,395,186
The Military contribution, deducting repayment for deficiency of troops ..	1,141,957
Interest on Colombo Harbour Works Loan, &c., &c.	188,723
Management of Forests, Salt Ponds, and Pearl Fishery	470,023
Total ...	4,195,889

13. Deducting these sums from the gross expenditure, it will be seen that the whole cost of the Civil Administration of Government, including our Establishments, Public Justice, the Public Education, Hospitals, Roads, Police, Prisons, Posts and Telegraphs, amounted to Rs. 9,337,370.

14. Considerable reductions have been made in the expenditure on Public Works; the cost of maintaining our roads has been largely reduced, and the Establishments have been curtailed. Further reductions are in contemplation, but it must not be overlooked that the progress of the colony in population and in the requirements of civilization make unavoidable an expenditure in many ways much greater than was sufficient ten years ago. Take, for example, the Posts and Telegraphs. In the year 1872 the expenditure was as follows:—

	Rs.
Postal Establishments ..	90,734
Conveyance of Mails ...	95,434
Making a Total of ...	Rs. 186,168

The expenditure of 1881 was as follows:—

Postal Establishments ..	125,944
Conveyance of Mails ..	251,109
Cost of Telegraphs ...	198,128
Making a Total of ...	Rs. 575,181

It would be obviously impossible to reduce the expenditure to the level of 1872 without depriving the public of many of the advantages in Postal and Telegraphic communication which they now enjoy and value.

15. There is another branch of the expenditure which has steadily increased year by year for the last ten years—that is, the education of the people. In 1872 the Department of Public Instruction cost in all Rs. 261,825. By 1881 the expenditure had risen to Rs. 504,300. It is satisfactory to note that this large increase is wholly attributable to the institution of new schools and the extension of education to thousands more children, and that under the able administration of the present Director of Public Instruction the actual cost per head of each child's education has been diminished. But the fact of the great increase remains, and as the revenue is limited so must be the expenditure, and I have informed the Director that the Government cannot, at least for the present, allow any further increase in the vote for Public Instruction, which already absorbs more than five per cent. of the whole sum available for the support of the Government.

16. Another item of our expenditure which has largely increased is in the outlay over Public Hospitals, and other charges incidental to the maintenance of the public health. These charges have increased from a total of Rs. 307,338 in 1872, to Rs. 551,026. That the native population derive immense benefit from this expenditure is undoubted, and this will be a matter

of satisfaction to the Council; but it is clear that no further increase can be allowed in this direction until special provision be made for it, for the relief given is almost wholly eleemosynary, the total refunds for hospital expenses amounting only to Rs 15,950, or less than three per cent. of the expenditure.

17. The revenue for the present year does not show any improvement. The amount received during the first eight months of the year is Rs. 8,050,358, being less than two-thirds of the whole estimated revenue by Rs. 632,971. The expenditure has been, and is being, carefully regulated so as not to exceed the actual revenue, and it is manifest that till the revenue shows signs of improvement the utmost economy consistent with efficiency must be enforced by the Government.

18. It is in this spirit that the Estimates for the coming year have been framed, and I trust that they will receive the careful attention of the Council.

19. An increase will be asked for in the Department of the Master Attendant of Colombo, consequent on the necessity of providing additional qualified Pilots for the Port. This necessity will be at once recognized by the Council as unavoidable.

20. I am authorized by the Secretary of State to propose to you the grant of a personal allowance at the rate of Rs. 2,000 per annum to the Director of Public Instruction in recognition of the valuable services which Mr. Bruce has rendered in the preparation of the Revised Code, and the re-organization and administration of the Department of Public Instruction generally.

21. In consequence of the reductions which it is necessary to make in the votes for Public Works and Roads, it is proposed to reduce the number of Provincial Assistants from eight to seven, and the number of Superintending Officers from forty-eight to forty-three. These, with some minor reductions, will reduce the cost of the Public Works Establishment by Rs. 43,727·20.

22. The works which it is proposed to undertake next year are necessarily few in number.

23. It is proposed to employ convict labour in completing the walls of the new Lunatic Asylum and preparing for the reception of patients. A vote of Rs 10,000 will be asked for the pay of the necessary overseers for this work. The Report of the Commission appointed last year to consider the accommodation provided in this building will be laid on the table.

24. A vote will be proposed to you for your consideration of Rs. 4,350 for improving the water-supply of the important station of Badulla. A new supply of wholesome water to the Civil Hospital there is an imperative necessity, and advantage may be taken of this to improve at small cost the supply of good water for the town generally, which is very defective.

25. A vote of Rs. 11,000 is proposed for three new roads, one to Eratne in the Western Province, costing Rs. 5,000; a bridle path to Udugama in the Southern Province, costing Rs. 2,500; and a tavalam road from the end of the Uda Pussellâwa road, now under construction, to the U'má-oya, in aid of which Rs. 3,500 is asked.

26. It has been found possible, in consequence of the introduction of the contract-system and of a stricter economy, to reduce the cost of maintaining the roads from Rs. 1,196,857 to Rs. 1,042,238, showing a saving of Rs. 154,619, which may be effected without sensibly lowering their condition. There are 2,886 miles of roads to be maintained, so that the average cost of upkeep to the Colonial Treasury is at the rate of Rs. 361 per mile. I use the words the cost "to the Colonial Treasury" because the absolute cost is somewhat greater. Under the Branch Roads' Ordinance one-half of the cost of maintenance of the roads constructed under that Ordinance is paid by the owners of the estates, for the benefit of which the roads were constructed. The half cost so to be paid in 1883 is Rs. 50,171; and the value of that part of the labour due under the Thoroughfares Ordinance, 10 of 1861, which is appropriated to principal roads for 1883, is Rs. 230,995. Adding these sums, the actual cost of maintaining our principal roads averages Rs. 458 per mile.

27. Much difficulty has always been experienced in working the Thoroughfares Ordinance, owing to the difficulty of dealing successfully with road defaulters, the numbers of which have greatly increased of late years, often over-crowding our prisons without any satisfactory result, and it has become increasingly difficult to enforce the provisions of the Ordinance upon those who are unwilling either to pay the commutation or to give their labour. The subject was referred to a Commission who have made many valuable suggestions in a Report that will be laid on the table with a view to legislation.

28. A vote of Rs. 100,000 will this year be proposed to you for carrying on new Irrigation Works besides the usual vote for the maintenance of completed works. There are improvements urgently called for to several of the important irrigation works in the Southern Province, especially at Tissa-Maharáma, where the works undertaken and carried out under the administration of Sir William Gregory have now been taken advantage of, and hundreds of acres of paddy are under cultivation below the tank. It is necessary also to keep faith with the villagers in the North-Western and North-Central Provinces, who have in many cases repaired the bunds of their tanks by their own labour on the understanding that the Colonial Government would build the requisite sluices. As regards these two Provinces, and in fact the low country generally, it appears to be certain that no continuous supply of water through dry seasons can be absolutely relied upon from any tanks not fed, as most of those in ancient times seem to have been, from a river or perennial stream, and it is impossible to regard village tanks filled only by rains as a thoroughly satisfactory supply; but these last do, at least, enable the villagers to cultivate much more paddy than could be grown without this aid, and to that extent they are useful. Hereafter it may be found possible to restore some more of these ancient works by the aid of which a dense population was enabled to live on plains now covered with forest and jungle where men go to hunt, but for the present our efforts must be restricted chiefly to the improvement of irrigation works in those districts where a settled population already exists ready to take advantage of them and develop to its utmost the resources of every acre of irrigated land.

RAILWAYS.

29. The loan borrowed for the Kandy railway has now been completely provided for, and the remaining debentures will be paid off next year when they fall due. Up to the end of 1881 the Government has had to pay Rs. 696,000 a year on this account. In the estimate for 1882 the vote was reduced to Rs. 162,000, and it has now finally disappeared. But in its place we have to provide for the interest of the loans contracted for the Mátalé and Nánu-oya extensions. This interest amounts to Rs. 613,350, and is not at present recouped by any receipts whatever from the railways for which the money was borrowed.

30. The Mátalé branch railway, opened in October, 1880, did not last year yield enough to pay even its working expenses. The Administration Report of the Traffic Manager shows that the working expenses of this branch line in 1881 amounted to Rs. 137,527, and the receipts to Rs. 126,808 only, showing a loss of Rs. 10,718 on the working of the line, besides the whole of the interest, amounting to Rs. 132,330, so that this branch railway caused a direct loss to the colony last year of Rs. 143,048. It may be expected that by a reduction in the working expenses and by a gradually-extending use of the railway in preference to carts (which still carry part of the traffic between Kandy and Mátalé) a margin of profit may hereafter be obtained over working expenses sufficient to pay a part if not the whole of the interest of the loan; but I do not anticipate that this branch line will ever attain the brilliant financial success of the Main Line.

31. No part of the Nánu-oya extension is open to traffic, and as the Contractors are not bound to complete the first section to Hatton until May 1884, it would not be safe to calculate upon any returns from this line next year. I may here notice that the traffic over the branch line between Pérádeniya and Náwalapitiya gave last year a profit to the Treasury of Rs. 79,886, equivalent to three per cent. on the sums expended on that line.

32. I would also draw the attention of the Council to the sea-side line between Colombo and Kalutara. The working expenses of this most useful and convenient line amounted last year to Rs. 209,565, and the receipts to Rs. 273,484, showing a profit of nearly 3 per cent. This profit, like that on the Náwalapitiya railway, was paid into the Treasury, as both the railways were constructed out of revenue. The colony may well be satisfied that the investment of its surplus revenue in a work so generally useful as the sea-side line should yield a profit of three per cent., but it is obvious that such a percentage would not pay the interest of a loan even at the low rate at which Ceylon can borrow in the London money market, and it would not therefore be profitable to borrow money to extend the railway to Galle unless there were shown to be sources of traffic which have not as yet been developed.

33. The Report of the Commissioners appointed last January to enquire and report how the traffic between the Northern and Central parts of Colombo could best be served will be laid on the table. The Commissioners show very conclusively that a railway to Maṭṭakkuliya can hardly be expected to pay, and they are inclined to recommend a tramway. It appears to me that a tramway, which can be built for a moderate sum, will be the most satisfactory as well as the cheapest means of meeting the traffic requirements of the people of Maṭṭakkuliya.

34. The new railway bridge over the Kelani was completed and opened for traffic last month—not before the increasing insecurity of the old bridge had become a source of anxiety to the responsible officers. It is satisfactory to note that, notwithstanding many difficulties, this important work was accomplished, under the able direction of Mr. Strong, without exceeding or indeed exhausting the estimate.

35. After the close of the Session of 1881 I transmitted to the Secretary of State a copy of the resolution adopted by the Council urging that immediate sanction be given for the commencement of the Haputalé extension. As that resolution is still before the Secretary of State, I will only say that, having during the recess had an opportunity of travelling over the country from Hambantota to Wellawáya and Koslanda and through part of the Haputalé district to Haldummulla, returning thence to Colombo by Ratnapura, I am convinced that there is no other line that can be devised that will place Haputalé in railway communication with Colombo so cheaply as the 26 miles of line required to carry on the railway from Nánu-oya to Haputalé. But with no part of the Nánu-oya line yet open to traffic, or any immediate prospect of an early opening, with the Mátalé line not even paying its working expenses, and with a still falling revenue, it would be clearly inopportune to urge at present the immediate undertaking of a fresh burden involving an expenditure of seven millions of rupees.

36. It will be remembered that during the last Session the attention of the Government was called to the existing Fort Railway Station, and the Government acceded to a motion made that steps be taken to improve it. There is no question that the complaints regarding this station are well-founded; the situation of it is inconvenient, and will still be inconvenient even if the pond near it were filled up as proposed. In considering the most convenient site along the line in the immediate neighbourhood where a new station could be built, it was suggested by Mr. Strong that by removing it a very few yards to the north it could be so placed that a continuation of Chatham street across the canal and the vacant ground beyond would lead direct to the station, and give the bankers, merchants, and others whose business takes them into the Fort the easy and short access to the railway which has been so long desired. There is no doubt also that a prolongation of Chatham street over the canal and across the waste ground beyond the Survey office (now occupied only with the pipes for the Colombo Waterworks) would be a great public improvement, and probably the cost of it might be defrayed by the sale of a portion of the land as building sites on each side of the new street. And the scheme appears to me to be so well worthy the favourable consideration of the Council that I have postponed the alterations of the station until you had had an opportunity of considering it. The plans and estimates for it will be laid on the table.

COLOMBO WATERWORKS.

37. The construction of the Colombo Waterworks has been commenced by the Contractors under the superintendence of the Resident Engineer, and reports of the progress will be laid before you.

COLOMBO HARBOUR WORKS.

38. The remaining great work in progress is the improvement of the Colombo Harbour, and I am glad to be able to congratulate the Council on the splendid success which has thus far attended Sir John Coode's work, and given not only to Ceylon, but to England and the world, a first-class harbour in a geographical position of the highest importance.

39. This great work will, so far as regards the protection originally designed to be given to the harbour, be completed next year It appears to be probable that after providing for the light which must be placed upon the end of the Breakwater, the entire cost of it will be well within the estimates. It will be seen by the letter of Sir John Coode, laid upon the table, that there is no reasonable prospect of a North Arm being constructed in a durable manner for a smaller sum than £193,000. In the present financial condition of the colony, I cannot take the responsibility of proposing the expenditure of any money in excess of the limit repeatedly laid down by this Council on the basis of the revenues that may be raised from the port, and therefore the construction of a North Arm must, I fear, be postponed, at any rate until experience shall prove that the revenues derived from the new Port Dues will pay the interest on the cost of its construction.

40. In accordance with the provisions of the Ordinance No. 6 of 1875, I have, with the advice of the Executive Council, drawn up a schedule of increased Port Dues to be hereafter levied at Colombo; and this schedule has been submitted to and approved by Her Majesty's Government, as required by the 8th section of the Ordinance. It is proposed that the new dues shall be levied from and after the first day of January, 1883.

41. The number of large steamers and other vessels resorting to Colombo has been so enormously increased since the creation of the harbour, that I feel justified in bringing before the Council for consideration complaints which have been made by competent persons, especially Commanders of mail steamers, of the inadequacy of the light exhibited on the Clock Tower. This light is a fixed light of the second order, and is calculated to be visible—and in clear weather is visible—at a distance of eighteen miles. But the weather is often not clear, and the light then is not seen for more than ten or twelve miles. A revolving light of the first order would, it is said, be visible for thirty or thirty-five miles, and would be of course proportionately more useful to ships. A new light has, under any circumstances, to be provided for the end of the Breakwater, and for this purpose our present light would answer admirably. I have therefore proposed for Sir John Coode's consideration that a revolving light of the first order should be substituted at Colombo for the present light, which could be placed on the Breakwater. This would provide a light of the first order for Colombo at the least possible expense. I have ascertained that such a light could be placed on the Tower without affecting its stability.

42. The question of landing accommodation for passengers is one of much importance, and has been carefully considered, with the aid of the Principal Collector of Customs and the Master Attendant. The construction of another jetty in the already circumscribed area opposite the Custom House could not fail to cause much inconvenience to boats, which are already too crowded in the narrow space; and therefore, in order to meet at once temporarily the admitted want of a jetty for passengers, I determined to move the Master Attendant's stores and plant, buoys, anchors, &c., from the jetty called the Master Attendant's jetty to the new ground reclaimed at the root of the Breakwater, and to improve the Master Attendant's jetty by the addition of stairs and platforms, so as to make it convenient for passengers, and to devote it exclusively to their use. This jetty is the more convenient for this service, as it is close to the entrance to the Custom House premises, in the vicinity of which passengers must land: and I may add that in order to give greater facility of ingress and egress it is proposed to widen the gateway so as to admit two carriages to pass each other, and to provide standing room for carriages inside the gates. This accommodation may serve for present needs, but further improvements will be required if the number of ships increase.

LEGISLATION.

43. I had hoped to be able in this Session to bring under the consideration of the Council the long-contemplated and urgently required reform of our Criminal Law. For this end two Codes were prepared, a Code of Criminal Law, based on the Penal Code of India, and adapted by Chief Justice Sir Richard Cayley to the circumstances of Ceylon; and a Code of Criminal Procedure, compiled with great ability by Sir John Phear. Both these Codes have been submitted to the Secretary of State and are now under the consideration of Her Majesty's Government. The Queen's Advocate has, by the direction of the Secretary of State, remained in England to complete a careful revision of these Codes, which has been deemed necessary previous to laying them before the Council.

44. I regret that this delay is found necessary, but the Council will recognize the imperative necessity of the utmost care in the preparation of measures so important as these, not only that they may be legally perfect, but also that they may be suited to the circumstances and the needs, the character, and the habits of our people.

45. A measure will be laid before you for repealing the Ordinance passed last year by which it was enacted, in deference to the instructions of the Secretary of State, that the cost of the medical care of coolies in the Planting Districts should be levied by means of a tax assessed upon each estate according to the number of cooly labourers employed upon the estate. That this is in theory the most equitable mode of assessing the charge hardly admits of any dispute, but I have

never under-rated the practical difficulties which would have to be encountered in the collection of such a tax, and the Secretary of State, having reconsidered the whole question, with the aid of the representations made by the great body of Planters in a petition against the measure, has ultimately decided to abandon the proposed tax, and has directed me to propose to you the repeal of the Ordinance No. 18 of 1881. A Bill to effect this and to amend the Ordinance of 1880 in some minor particulars will be proposed to you. In consideration of the existing depression in the coffee industry, the Secretary of State has allowed me to propose to the Council that the Government shall, for 1883, pay one moiety of the salaries of the medical officers who will be employed under the Medical Aid Ordinances. According to the provisions of the Ordinance of 1880, the existing civil hospitals will be opened for the reception of coolies from the districts near them, and the Government will assume the charge of such other hospitals as may be deemed necessary, the employers of coolies paying the daily rate fixed by the Ordinance for every cooly admitted into hospital from their estates. Papers on this question will be laid before you. It is proposed that the medical charge of the coolies shall be carried on to a very great degree by native practitioners conversant with the language, the manners, the feelings, and even the prejudices of the coolies. By their means the health of the cooly will be best secured, and it is of course his welfare that it is the first duty of the Government to study. The employment of native practitioners will reduce the charge, which must, however, involve a present burden on the public, for which some compensation will be found in the medical relief that will be accessible to the native population now in the coffee districts.

46. A Bill will be laid before you authorizing the opening of Savings Banks at Post Offices under regulations to be made by the Governor and Executive Council. This measure was pressed upon the Government last year, but we were not then prepared to accede to it. The question has been re-examined during the recess, and the result is to show that sufficient precautions can be taken to render it reasonably safe to institute such banks. This being so, I feel it my duty no longer to delay this measure. There never was any doubt in my mind as to the general usefulness of such institutions or the readiness of the people to take advantage of it, for that is proved by the experience of the Ceylon Savings Bank.

47. It has been decided by Her Majesty's Government, in the interest of commerce, to erect a light-house on Minicoy, one of the Laccadive Islands, and you are asked to give your early assent to a measure allowing the Light Dues imposed by the Imperial Parliament on British ships navigating these seas to be collected in the ports of this colony, as is done in the case of the Basses Lights. A Bill for this object will be laid before you at once.

48. A Bill will be submitted to authorize the Governor to borrow such sums as may be required in addition to the loan already authorized for the completion of the Colombo Harbour Works, omitting the North Arm.

49. Certain Muhammadan residents in Colombo appear to have been unintentionally deprived of a restricted right of burial in places of family interment within the burial ground of the Maradána mosque, and though the prohibition of intramural interments in Colombo should be firmly maintained, it appears only just to preserve the personal and limited rights that it was intended to conserve when the Proclamation closing the burying ground of the mosque was issued.

50. An Ordinance to regulate the use of private telephones is necessary, and a Bill for this object will be proposed.

51. I have already alluded to the amendments recommended by the Road Commission in the Thoroughfares Ordinance which will be brought forward.

52. Efforts have been, and are being made, to induce our people to emigrate in considerable numbers to the colony of Queensland as agricultural labourers. There can be no objection to such an emigration if it be for the welfare of the emigrants, but it is the duty of this Government to take every possible care that the emigrants from Ceylon are conveyed in properly appointed vessels; that the terms offered to them are fair and reasonable; that the Government of Queensland is prepared to protect them in their rights during their residence in that colony, and that their return to Ceylon is properly guaranteed. It is most important that the Government of Queensland should undertake their protection, for the emigrants will find themselves in a strange land unable for the most part to speak the language or to protect their own rights. A Bill will therefore be introduced to enable the Government to prescribe the terms upon which the emigration may be carried on. These terms will, as far as circumstances will permit, be identical with the terms laid down by the Indian Government for the protection of coolies emigrating from India. It is not proposed to repeal or alter the Ordinance 3 of 1847, by which it is prohibited to contract with natives of India, who have emigrated to Ceylon, to proceed from Ceylon to any other British or any foreign colony.

53. There are some other measures of legislation, chiefly amendments to existing laws which it will be my duty to bring under your consideration, but which it is unnecessary to notice in detail now.

54. I regret that I am not in a position at present to lay on the table the long promised measure for organizing and regulating a Pension Fund for the widows and children of Public Officers. The matter is, however, under the earnest consideration of the Secretary of State, and I trust that I shall yet be enabled to lay the Bill before you in time to be considered during the present Session.

EXPORTS.

55. The exports of coffee, as the Council are aware, fell last year to cwts. 436,991 being less than in any previous year since 1854. As compared with the exportation of the preceding year 1880, the decline was cwts. 219,674; but if we compare the export of 1881 with the average of the ten preceding years—1871–80—the fall will be found to be cwts. 361,344, of which the value, at the Customs rate of Rs. 50 per cwt., would be Rs. 18,067,200. The value of all the exports

taken together during the same ten years —1871-80—averaged Rs. 48,641,420. The total exports of 1881 were valued at Rs. 36,188,636, being less than the average by Rs. 12,262,784. It follows, therefore, that the loss on coffee was compensated to the extent of Rs. 5,804,416 by increased exportation of other productions, such as cinchona bark, tea, plumbago and cinnamon.

56. One of the chief causes to which the decline in the yield of coffee is to be attributed is the leaf disease which has devastated the plantations for several years, and spread over the whole Island. But there is no doubt also that in some particular localities the gradual washing away of the soil, the danger of which was pointed out by scientists some years ago, has aided in diminishing production. These causes have been coincident of late with a greatly diminished use of imported manure. The Customs House records show that the value of manures of all kinds imported into the Island gradually increased, until in 1877 it had reached the large figure of Rs. 2,614,019. Since then it has rapidly declined, and last year reached only Rs. 375,883, being barely more than one-seventh of the value imported five years before. However unavoidable this contraction of the importations may have been, it is hardly doubtful that the effect must have been to lessen production.

57. Thus far the exports of coffee for 1882 show a decided increase over the exports of 1881, being for the first six months of the present year cwts. 361,425, against cwts. 204,729 in the corresponding period of last year. It is to be hoped that in many districts coffee will long continue to be profitably cultivated, but the great attention now turned to other products, and the energy which has been displayed in their cultivation, seem destined to be crowned with success. The exports of cinchona bark increase largely every year. They were in 1881 nearly twenty-fold what they were in 1877, only four years before. The export of tea last year was fifty per cent. greater than the export of 1880. Other exports, too, have increased in value, and amongst the humbler articles which make up the trade of the colony is jaggery sugar. I trust that the day may come when Ceylon will be able to export cane sugar as well as jaggery. For this industry she has the overwhelming advantage of a command of cheap labour. The great practical difficulty appears to be in the want of sufficient fertility in the soil generally to produce sugar in remunerative quantities, yet this difficulty appears to have been overcome at Baddégama, where, on my visit to the Southern Province, I was shown a field of canes said to produce a ton and a-half of sugar to an acre. This field was undoubtedly small, and on my way to Baddégama I saw on the banks of the Gindura in native gardens some of the most inferior cane that I have ever seen grown in the tropics. But much improvement may be effected by the importation of better sorts of cane and by improved cultivation. I have requested the Director of the Royal Botanical Gardens to undertake at Henaratgoda, as an experiment, and on a small scale, the cultivation of some improved kinds of cane to be imported from Mauritius, and, if successful, to distribute the plants so raised among those desirous to cultivate cane. I know that sugar has been tried in past years, both in the low country and at Pérádeniya, and that it always failed. It is for this reason that I regard the experiment now being so courageously tried at Baddégama with keen interest, for an assured success there would naturally modify the opinion as to sugar-growing that past failures have created, and might lead to extended cultivation in favourable soils. Such a result could not fail to add materially to the wealth of the colony.

58. The attention of the Government has been turned to the possibility of placing the management of the Crown forests on a better footing so as to ensure a larger and more certain revenue. Hitherto the forests have been entirely managed provincially under the superintendence of the Government Agent of each Province. The result of this has necessarily been a want of combined action, giving rise to many evils, one of which has been the competition of Province against Province, unintended, of course, but none the less unfortunate, in the sale of timber. The management in other respects is defective. It has not yet been found practicable to supply from our own forests in sufficient quantities good sound railway sleepers of approved quality at the same price as such sleepers can be imported from Norway, and all our railways, with the most insignificant exceptions, have up to this time been supplied with Baltic wood sleepers. Such a state of things cannot be regarded as satisfactory, but before any steps could be taken for the improvement of the forest administration it was necessary to have a more clear conception than we have at present of the general extent and value of our forests, and the expenditure which it would be prudent to incur in improvements. With a view to obtain this necessary information, and also the opinion of a skilled officer on the forest question generally, application was made to the Indian Government, who detached one of the able officers of the Indian Forest Department to visit Ceylon and report on its forests. Mr. Vincent is still engaged upon this task, but it will shortly be concluded, and his report will be laid upon the table.

59. The present year has been marked by an epidemic of small-pox, which has prevailed at Colombo for several months to such an extent as to make it, in the opinion of the medical authorities, necessary to adopt the stringent measures authorized by law for preventing its spread among the people in the more crowded quarters of the city. As a result of those measures and of the beneficial effects of the vaccination, long and thoroughly carried out, the epidemic has been restrained within moderate limits, and it seems to be now gradually disappearing. Apart from this epidemic, the public health has been generally satisfactory.

60. In addressing the Council from this chair a year ago I had the satisfaction of bringing under your notice the formation of the Regiment of Ceylon Light Infantry Volunteers. By a vote of public money and by legislation the Council expressed their approbation of the movement. A year has since passed, in which any mere temporary enthusiasm has had time to cool, and it might have been feared that as enthusiasm cooled the volunteer movement would have languished. Such has not been the case. The Colombo Volunteers have attended fairly well to their military exercises. Subsidiary Volunteer Corps have been formed. On my visit to Badulla, last March, I was received by a well-drilled Guard of Honour formed from the local corps in that

town. Another corps has been formed in Kandy, and it may hereafter become a question whether the protection of the Island from foreign invasion may not be partially intrusted to the Volunteers.

In conclusion, I trust that our proceedings may, under the blessing of Divine Providence, be so directed as to promote the good of the people for whom we are called to legislate.

3. His Excellency the Governor having retired, the chair was taken by the Lieutenant-Governor.

4. ADDRESS IN REPLY TO HIS EXCELLENCY'S SPEECH.—The Auditor-General moved that the following gentlemen be appointed a Sub-Committee to prepare the Address in reply to His Excellency's Speech:—The Hon. the Auditor-General, the Hon. the Treasurer, the Hon. the Surveyor-General, the Hon. P. Ráma-Náthan, the Hon. W. W. Mitchell, and the Hon. A. L. De Alwis.

Seconded by the Government Agent, Western Province.—Carried.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned to Wednesday next, the 27th September, 1882, at 3 o'clock P.M.

Wednesday, 27th September, 1882.

1. The Council met pursuant to adjournment. The Lieutenant-Governor took the chair.

2. ADDRESS IN REPLY TO THE SPEECH OF HIS EXCELLENCY THE GOVERNOR.—The Auditor-General brought up the reply of the Council to the Address of His Excellency the Governor, which was read by the Clerk of the Council. The Auditor-General moved the adoption of the Draft Address, seconded by the Government Agent, Western Province.—Carried.

The Council then adjourned.

3. His Excellency the Governor having arrived, took the chair.

4. The Lieutenant-Governor read the Address of the Council in reply to the Governor's Speech:—

MAY IT PLEASE YOUR EXCELLENCY,

THE Legislative Council tender to Your Excellency their thanks for your address, and for the clear exposition therein given of our present financial position. The continued decline of the revenue is a matter for deep regret, and the Council fully recognize the paramount duty of reducing expenditure so far as this may be done with a due regard to the best interests of the Colony.

The Council are glad to learn that the revenue of 1881 exceeded by so considerable a sum as Rs. 153,232 the expenditure of that year; at the same time they note that this satisfactory result was due to an unusually large receipt from the Pearl Fishery. They, however, cannot but view with anxiety the falling off in receipts under some of those items of revenue referred to by Your Excellency, which afford the most reliable tests of the prosperity of the country.

The Council observe with satisfaction that notwithstanding the increased charges on account of Railway loans and Administration of Justice, the extraordinary expenditure necessitated by the taking of a Census, and by the partial failure of the salt collection, the expenditure of the year 1881 showed a reduction of Rs. 731,231 on that of the previous year. They note that as the revenue has decreased, a concurrent reduction has been effected in the cost of maintenance of roads and in the establishment of the Public Works Department, and they are aware that while making such further reductions as may be reasonable and possible, the progress that the Colony has made during the past ten years necessitates a yearly outlay on these, as on other branches of expenditure, considerably in excess of that required in 1872. No stronger example of this can be adduced than that given by your Excellency, in referring to the Postal Establishments and conveyance of mails; and the Council consider that the success of the steps that have been taken under circumstances of no ordinary difficulty to provide for the convenience of the population in these respects, is a matter for congratulation.

Although the increase in the cost of the Educational establishments of the Colony is very large, the Council learn with satisfaction that this is due to the institution of new schools and to the extension of education; and that the cost per head of each child's education has been diminished. At the same time they perceive the necessity for the limits placed by Your Excellency on the expenditure on Public Instruction.

The Council regret that the revenue collected during the first eight months of the current year is less than the estimated revenue for that period by Rs. 632,974.

The Council will be prepared to give their best attention to the estimates for the coming year when they are laid before them.

The reduction in the cost of maintaining the roads by the introduction of the contract-system is viewed with satisfaction by the Council, but they would express a hope that the strictest supervision over the work of the contractors will be enforced, in order that the excellent character of the roads of the Island may be maintained.

The Council regret to learn that the Secretary of State has not yet given his sanction to the construction of the twenty-six miles of railway from Nánu-oya to Haputalé. It has been shown that it is essential to the financial success of the section from Náwalapitiya to Nánu-oya that the extension should be completed. It has been ascertained by Your Excellency that no other route would serve the Uva District so well, and the Council are of opinion that the Secretary of State should be further urged to permit the Colony to proceed with the work without delay, and they would venture to express an opinion that to a very considerable extent the construction works might, with advantage, be carried out departmentally.

The Council learn with satisfaction that the loan raised for the construction of the Kandy Railway is completely extinguished; but they regret to hear that the hopes of improved traffic receipts from the Mátalé Line have not been realized.

It is very gratifying to the Council to be able to congratulate Your Excellency on the complete success of the Colombo Harbour works, and they are glad to hear that the Southern Arm of the Breakwater, as at present designed, will, it is anticipated, be completed during the ensuing year.

The Council are prepared to devote their best attention to the various measures of legislation that may be introduced during the present Session; and they join with Your Excellency in the hope that their proceedings may be so directed as to promote the good of the people.

5. The Governor replied as follows:—

Honourable Gentlemen of the Legislative Council,

I have to thank you for the reply to my Address that has just been read, and for your promise of attention to the various measures that will be laid before you.

6. Papers.—The Lieutenant-Governor laid on the table the following Papers:—

Returns showing wave-gauge observations on Colombo Harbour Works from January to March, 1882, and a Memorandum showing the number of days when block-setting was interrupted at the Pier head during the last N.E. monsoon.

Sessional Paper 1, 1882.—Further Papers relating to the Colombo Waterworks.

Do. 2, „ —Papers relating to Irrigation under Tissamaharáma Tank, including a report by J. H. Dawson, Esq.

Do. 3, „ —Despatch from the Secretary of State in reply to a Resolution of the Legislative Council, dated 10th November, 1881, on the subject of the Colombo Harbour Works.

Do. 4, „ —Report of the Commissioners appointed to "inquire and report (1) upon the best method of collecting or exacting labour under the Ordinance No. 10 of 1861, and (2) upon the unrestrained power of commutation at present permitted, and the best method of recovering the commutation money under the Ordinance."

Do. 5, „ —Further Papers relating to the Colombo Harbour Works.

Do. 6, „ —Despatch from the Secretary of State forwarding a report on the valuation of samples of Ceara Rubber.

Do. 7, „ —Further Papers relating to the Colombo Harbour Works.

Do. 8, „ —Report of the Commissioners appointed to "inquire into and report how the Mattakkuliya traffic would best be served; whether by the construction of a line of Railway to Mattakkuliya or by the extension of the Mádampitiya road."

Do. 9, „ —Correspondence relating to the Galle Harbour improvements.

Do. 10, „ —Report on the Kayts Harbour improvements.

Do. 11, „ —Correspondence relating to a proposed Graving Dock at Colombo.

Do. 12, „ —Return of the Cash Balances of the Colony.

Do. 13, „ —Despatch from Secretary of State on the subject of the introduction of New Products into Ceylon.

Administration Reports (1881), Part I., Revenue:—

Customs.

Provincial Agencies.

Part II.—Scientific:—

Report of the Director of Public Works.

Report of the Surveyor-General.

Part IV.—Miscellaneous :—

Report of the Director of the Royal Botanic Gardens.

Report of the Principal Civil Medical Officer and Inspector-General of Hospitals.

Report of the Director of Public Instruction.

7. KANDYAN MARRIAGE ORDINANCE, No. 3 OF 1870.—The Hon J. VanLangenberg gave notice that at the next meeting of Council he would ask—

"(1) Whether the attention of the Government has been directed to the trial of a Kandyan for bigamy at the last Criminal Session of the Supreme Court at Kurunégala, and the acquittal of the accused on the ground of an incorrect translation of the marriage formula prescribed by the 'Amended Kandyan Marriage Ordinance, 1870.'

"(2) Whether it is true that the learned Commissioner of Assize, before whom the case was tried, caused to be proclaimed in Court on the strength of the said mistranslation that all Kandyan Marriages were void, and the issue of such marriages bastards.

"(3) Whether the Government adopt the views of the learned Commissioner; and, if so,

"(4) Whether the Government purpose to take any steps to legalize all past marriages; and to move for papers."

8. DISTRICT JUDGESHIPS OF COLOMBO AND KANDY.—The Hon. J. VanLangenberg gave notice that at the next meeting of Council he would move—

"That the Despatch of Lord Kimberley respecting the appointment of practising Advocates to fill the District Judgeships of Colombo and Kandy be laid on the table with any Despatch from Sir M Hicks-Beach modifying the terms of the former Despatch; also, the correspondence, if any, which led to the latter Despatch."

9. ARTESIAN WELLS FOR VAVU'NIYAN-VILÁNKULAM.—The Hon. P. Ráma-Náthan gave notice that at the next meeting of Council he would

"Call attention to the grievous suffering which the inhabitants of certain parts of the Vavúniyan-Vilánkulam District undergo for want of water, and to ask whether Government will not provide them with artesian wells, as recommended by the Assistant Government Agent."

10. REVISED CODE FOR AIDED SCHOOLS.—The Hon. P. Ráma-Náthan gave notice that at the next meeting of Council he would ask—

"In reference to the Revised Code for Aided Schools, 1881, whether the Director of Public Instruction has taken steps to incorporate in that Code the Indian University Examination, so that the rewards held out to superior education in Ceylon may be placed within the reach of those schools which prepare students for those examinations."

11. EMIGRATION BILL.—On the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, the Bill intituled "An Ordinance relating to the Emigration of Native Labourers from this Island under contract of Service," was read a first time, and the second reading fixed for the next meeting of Council.

The Lieutenant-Governor also laid on the table the letter addressed by this Government to Queensland Government on the above subject.

12. CURRENCY BILL.—On the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to substitute the currency of Rupees and Cents in certain Ordinances where sums of money are mentioned in terms of British currency," was read a first time, and the second reading fixed for next meeting of Council.

13. POST OFFICE SAVINGS BANKS BILL.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance to grant facilities for depositing small savings at interest," was read a first time, and the second reading fixed for next meeting of Council.

14. THE MINICOY LIGHTHOUSE, AND LIGHTHOUSE DUES ORDINANCE, 1882.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance to declare the consent of the Legislature to the erection of a Lighthouse on Minicoy island, and to the levy of dues in respect thereof, and to fix the dues payable in respect of the Minicoy and Great and Little Basses Lights," was read a first time, and the second reading fixed for next meeting of Council.

15. LUNACY ORDINANCE AMENDMENT BILL.—On the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to amend 'The Lunacy Ordinance, 1873,'" was read a first time, and the second reading fixed for next meeting of Council.

16. VILLAGE COMMUNITIES ORDINANCE AMENDMENT BILL.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance further to amend 'The Village Communities Ordinance, 1871,'" was read a first time, and the second reading fixed for the next meeting of Council.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned to Wednesday, the 4th October, 1882.

Wednesday, 4th October, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.
2. Proceedings of the last meeting read.
3. PAPERS.—The Lieutenant-Governor laid on the table the following Papers:—

   Sessional Paper XIV. of 1882.—Colombo Harbour Dues: Despatches relative to the introduction of increased rates of Port and Harbour Dues in Colombo.

   The Ceylon Blue Book for 1881.
4. BILL TO FACILITATE THE RECOVERY OF POSSESSION OF TENEMENTS AFTER DUE DETERMINATION OF TENANCY.—The Hon. P. Ráma-Náthan gave notice that at the next meeting of Council he would move

   "For leave to introduce a Bill to facilitate the recovery of possession of tenements after due determination of the tenancy."
5. ORDINANCE No. 5 OF 1877.—The Hon. P. Ráma-Náthan gave notice that at the next meeting of Council he would move

   "That it is not desirable to delay any longer the enforcement of Ordinance No. 5 of 1877 affecting registration of titles to land."
6. SUPPLY BILL, 1883.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1883," was read a first time, and the second reading fixed for the next meeting of Council.
7. REVISED CODE FOR AIDED SCHOOLS.—The Hon. P. Ráma-Náthan, pursuant to notice, asked, in reference to the Revised Code for Aided Schools, 1881, whether the Director of Public Instruction had taken steps to incorporate in that Code the Indian University Examination, so that the rewards held out to superior education in Ceylon may be placed within the reach of those schools which prepare students for those examinations.

   The Lieutenant-Governor replied and laid on the table copy of a Memorandum by the Director of Public Instruction on the subject.
8. KANDYAN MARRIAGE ORDINANCE No. 3 OF 1870.—The Hon. J. VanLangenberg having obtained leave of Council to amend the motion, of which he had given notice, pursuant to notice moved

   (1) Whether the attention of the Government has been directed to the trial of a Kandyan for bigamy at the last Criminal Session of the Supreme Court at Kurunégala, and the acquittal of the accused on the ground of an incorrect translation of the marriage formula prescribed by the "Amended Kandyan Marriage Ordinance, 1870."

   (2) Whether it is true that the learned Commissioner of Assize, before whom the case was tried, caused to be proclaimed in Court on the strength of the said mistranslation that all Kandyan Marriages were void, and the issue of such marriages bastards.

   Seconded by the Hon. P. Ráma-Náthan.

   The Queen's Advocate replied and promised to lay papers on the table.
9. DISTRICT JUDGESHIPS OF COLOMBO AND KANDY.—The Hon. J. VanLangenberg, pursuant to notice, moved that the Despatch of Lord Kimberley respecting the appointment of practising Advocates to fill the District Judgeships of Colombo and Kandy be laid on the table with any Despatch from Sir M. Hicks-Beach modifying the terms of the former Despatch; also, the correspondence, if any, which led to the latter Despatch.

   Seconded by the Hon. P. Ráma-Náthan.

   The Lieutenant-Governor replied and laid the Despatches asked for on the table.
10. ARTESIAN WELLS FOR VAVU'NIYAN-VILÁNKULAM.—The Hon. P. Ráma-Náthan called attention to the grievous suffering which the inhabitants of certain parts of the Vavúniyan-Viláṅkulam District undergo for want of water, and asked whether Government will not provide them with artesian wells, as recommended by the Assistant Government Agent.

    Seconded by the Hon. A. L. De Alwis.

    The Lieutenant-Governor replied.
11. LIGHTHOUSE ON MINICOY ISLAND.—The Hon. W. W. Mitchell, pursuant to notice, moved that before the consent of the Legislature is given to the erection of a Lighthouse on Minicoy Island, and the collection of dues in respect of the Minicoy and Great and Little Basses Lights, a statement be furnished showing the cost of the Great and Little Basses Lights, and the annual revenue derived therefrom; also, an estimate of the cost and revenue of the proposed Minicoy Light.

    Seconded by the Hon. F. M. Mackwood.

    The Lieutenant-Governor replied and promised to give the information asked for.

    Motion by leave withdrawn.

12. COLOMBO HARBOUR WORKS LOAN BILL.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance for the raising by Debentures of a further sum of £150,000 sterling for the improvement of the Colombo Harbour," was read a first time, and the second reading fixed for next meeting of Council.

13. EMIGRATION BILL.—On the motion of the Lieutenant-Governor, seconded by the Hon. P. Ráma-Náthan, the Bill was read a second time, and the Council went into Committee thereon. The Lieutenant-Governor having reported the Bill unamended, it was ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

14. CURRENCY BILL.—On the motion of the Queen's Advocate, seconded by the Treasurer, the Bill was read a second time, and the Council went into Committee thereon. The Queen's Advocate having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for next meeting of Council.

15. POST OFFICE SAVINGS BANKS BILL.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a second time, and the Council having gone into Committee thereon, the Bill was ordered to be referred to a Sub-Committee, consisting of the Lieutenant-Governor, the Treasurer, the Principal Collector of Customs, the Hon. P. Ráma-Náthan, the Hon. F. M. Mackwood, and the Hon. A. L. De Alwis.

16. MINICOY LIGHTHOUSE AND LIGHTHOUSE DUES ORDINANCE, 1882.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a second time, and the Council went into Committee thereon. The Lieutenant-Governor having reported the Bill unamended, the report was adopted and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for next meeting of Council.

17. LUNACY ORDINANCE AMENDMENT BILL.—On the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, the Bill was read a second time, and the Council went into Committee thereon. The Queen's Advocate having reported the Bill with amendments, the report was adopted and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

18. VILLAGE COMMUNITIES ORDINANCE AMENDMENT BILL.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a second time, and the Council having gone into Committee thereon, the Bill was ordered to be referred to a Sub-Committee consisting of the Lieutenant-Governor, the Queen's Advocate, the Government Agent, Western Province, the Government Agent, Central Province, the Hon. J. VanLangenberg, the Hon. P. Ráma-Náthan, and the Hon. A. L. De Alwis.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned to Wednesday, the 11th October, 1882, at 3 o'clock P.M.

Wednesday, 11th October, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.

2. Proceedings of the last meeting read.

3. PAPERS.—The Lieutenant-Governor laid on the table the following Papers :—

Sessional Paper XVI. of 1882.—Grain Tax Commutation : Report on the Commutation Settlement of the Sabaragamuwa District (Kuruwiṭi Kóralé excepted) under the provisions of the Grain Tax Ordinance, 1878.

Sessional Paper XVIII. of 1882.—Correspondence on the subject of the encroachment of the sea upon the sea-beach at Mutwal.

Sessional Paper XIX. of 1882.—Colombo Harbour Works : Correspondence relating to the dredging of the Colombo Harbour.

Numerical Abstract of the Inhabitants resident within the several Provinces of the Island liable to the performance of labour, under the provisions of the Ordinance No. 10 of 1861, for the year 1883.

Statement showing the amount of Schedule Fees recovered by the Fiscals of the several Provinces during the quarters ended 30th September and 31st December, 1881, and 31st March and 30th June, 1882.

Lists of Labour rendered and works executed in the several Provinces of the Island during the year 1881, under the Ordinance No. 10 of 1861.

4. CAUSE-ROLL, APPELLATE COURT.—The Hon. P. Ráma-Náthan gave notice that at the next meeting of Council he would

"Call attention to the healthy state of the Cause-roll of the Appellate Court, and point out that, by a judicious exercise of the committing justice-of-the-peace cases, if not by slightly extending the criminal jurisdiction of District Courts, the criminal business of the Supreme Court may be kept within control, and ask whether the Judges of the Supreme Court have had any correspondence on this subject with the Government, and, if so, whether the Government would lay the correspondence on the table for the information of the Council."

5. Harbour Dues.—The Hon. W. W. Mitchell gave notice that at the next meeting of Council he would

"Call attention to the Schedule of Harbour Dues proposed to be levied on 1st January, 1883, as detailed in Sessional Paper XIV. of 1882."

6. Cattle Trespass Ordinance No. 9 of 1876.—The Hon. A. L. De Alwis gave notice that at the next meeting of Council he would

"Call attention to the Cattle Trespass Ordinance No. 9 of 1876, and move that it is desirable to amend it in certain respects."

7. Retrenchment Committee.—The Lieutenant-Governor, having obtained leave of Council to amend the motion of which he had given notice, pursuant to notice moved that a Select Committee of this Council be appointed to consider and enquire into the Public Expenditure of this Colony, and to advise whether any, and what savings can be effected in the annual charges included in the Estimates now before Council, due regard being had to vested interests and to the maintenance of the efficient administration of the Island. That the following Members shall form the Committee, the sittings of which shall be open to all Members of Council:—The Hon. the Colonial Secretary, the Hon. the Auditor-General, the Hon. the Treasurer, the Hon. the Government Agent, Western Province, the Hon. the Government Agent, Central Province, the Hon. J. VanLangenberg, the Hon. P. Ráma-Náthan, the Hon. F. M. Mackwood, the Hon. W. W. Mitchell, and the Hon. A. L. De Alwis.

The Committee to have power to send for persons, papers, and records; five to form a quorum.

Seconded by the Auditor-General.

Carried.

8. Bill to facilitate the Recovery of Possession of Tenements after due determination of Tenancy.—The Hon. P. Ráma-Náthan, pursuant to notice, moved for leave to introduce a Bill to facilitate the recovery of possession of tenements after due determination of the tenancy.

Seconded by the Hon. A. L. De Alwis.

The Queen's Advocate replied.

Motion agreed to.

9. Ordinance No. 5 of 1877.—The Hon. P. Ráma-Náthan, pursuant to notice, moved that it is not desirable to delay any longer the enforcement of Ordinance No. 5 of 1877 affecting registration of titles to land.

Seconded by the Hon. J. VanLangenberg.

The Lieutenant-Governor replied.

Motion agreed to.

10. Gem Licensing Ordinance, 1882.—On the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, the Bill intituled "An Ordinance to prevent unlicensed gemming upon Crown Lands," was read a first time, and the second reading fixed for the next meeting of Council.

11. Local Boards Bill.—On the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to remove doubts as to certain powers of Local Boards under 'The Local Boards of Health and Improvement Ordinance, 1876,'" was read a first time, and the second reading fixed for the next meeting of Council.

12. Supply Bill, 1883.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a second time, and the Council having gone into Committee thereon, the Bill was ordered to be referred to a Sub-Committee consisting of the Lieutenant-Governor, the Auditor-General, the Surveyor-General, the Hon. P. Ráma-Náthan, the Hon. W. W. Mitchell, and the Hon. F. M. Mackwood.

13. Colombo Harbour Works Loan Bill.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a second time, and the Council having gone into Committee thereon, the Bill was ordered to be referred to a Sub-Committee consisting of the Lieutenant-Governor, the Government Agent, Western Province, the Surveyor-General, the Hon. W. W. Mitchell, the Hon. F. M. Mackwood, and the Hon. A. L. De Alwis.

14. Emigration Bill.—The report of the Law Officers of the Crown, dated the 9th October, 1882, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Auditor-General, read a third time and passed.

15. Currency Bill.—The report of the Law Officers of the Crown, dated the 9th October, 1882, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Queen's Advocate, seconded by the Treasurer, read a third time and passed.

16. Minicoy Lighthouse and Lighthouse Dues Ordinance, 1882.—The report of the Law Officers of the Crown, dated 9th October, 1882, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the

Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Auditor-General, read a third time and passed.

17. LUNACY ORDINANCE AMENDMENT BILL.—The report of the Law Officers of the Crown, dated the 9th October, 1882, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, read a third time and passed.

18. POST OFFICE SAVINGS BANK BILL.—The Lieutenant-Governor brought up the report of the Sub-Committee on the Bill, which was read by the Clerk of the Council. The Lieutenant-Governor having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned to Wednesday next, the 18th October, 1882, at 3 o'clock P.M.

Wednesday, 18th October, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.
2. Proceedings of the last meeting read.
3. ASSENT TO BILLS.—The Lieutenant-Governor announced that His Excellency the Governor had given his assent to the following Ordinances :—

   No. 1 of 1882, intituled "An Ordinance to declare the consent of the Legislature to the erection of a Lighthouse on Minicoy Island, and to the levy of dues in respect thereof, and to fix the dues payable in respect of the Minicoy and Great and Little Basses Lights."

   No. 2 of 1882, intituled "An Ordinance to substitute the currency of Rupees and Cents in certain Ordinances where sums of money are mentioned in terms of British Currency."

   No. 3 of 1882, intituled "An Ordinance to amend 'The Lunacy Ordinance, 1873.'"

   No. 4 of 1882, intituled "An Ordinance relating to the Emigration of Native Labourers from this Island under contract of Service."
4. PAPERS.—The Lieutenant-Governor laid on the table the following Papers :—

   Despatches to and from the Secretary of State relative to the District Judgeships of Colombo and Kandy.

   Administration Reports (1881), Part IV., Miscellaneous :—

   Reports of the Chief Resident and Locomotive Engineer and of the Acting Finance and Traffic Manager, Ceylon Government Railway.
5. CAUSE-ROLL, APPELLATE COURT.—The Hon. P. Rama-Náthan, pursuant to notice, called attention to the healthy state of the Cause-roll of the Appellate Court, and pointed out that, by a judicious exercise of the power of committing Justice-of-the-Peace cases, if not by slightly extending the criminal jurisdiction of District Courts, the criminal business of the Supreme Court may be kept within control, and asked whether the Judges of the Supreme Court have had any correspondence on this subject with the Government, and, if so, whether the Government would lay the correspondence on the table for the information of the Council.

   Seconded by the Hon. A. L. De Alwis.

   The Queen's Advocate replied laying on the table letter dated 4th March, 1882, from the Judges of the Supreme Court.
6. CATTLE TRESPASS ORDINANCE NO. 9 OF 1876.—The Hon. A. L. De Alwis, pursuant to notice, called attention to the Cattle Trespass Ordinance No. 9 of 1876, and moved that it was desirable to amend it in certain respects.

   Seconded by the Hon. P. Rama-Náthan.

   The Lieutenant-Governor replied.

   Motion by leave withdrawn.
7. THE MEDICAL WANTS ORDINANCE AMENDMENT ORDINANCE, 1881.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance to amend 'The Medical Wants Ordinance, 1880,' and to repeal 'The Medical Wants Ordinance, 1880, Amendment Ordinance, 1881,'" was read a first time, and the second reading was fixed for the 8th November next.
8. POST OFFICE SAVINGS BANK BILL.—The report of the Law Officers of the Crown, dated the 19th October, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Auditor-General, read a third time and passed.

9. GEM LICENSING ORDINANCE, 1882.—On the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, the Bill was read a second time, and the Council went into Committee thereon. The Lieutenant-Governor having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

10. LOCAL BOARDS BILL.—On the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, the Bill was read a second time, and the Council went into Committee thereon. The Queen's Advocate having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

11. TENANCY BILL.—On the motion of the Hon. P. Ráma-Náthan, seconded by the Hon. J. VanLangenberg, the Bill intituled "An Ordinance to facilitate the recovery of possession of Tenements after due determination of the Tenancy," was read a first time, and the second reading fixed for the next meeting of Council.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned till Wednesday, the 1st November, 1882.

Wednesday, 1st November, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.

2. Proceedings of the last meeting read.

3. ASSENT TO BILL.—The Lieutenant-Governor announced that His Excellency the Governor had given his assent to Ordinance No. 5 of 1882, intituled "An Ordinance to grant facilities for depositing small savings at interest."

4. PAPERS.—The Lieutenant-Governor laid on the table the following Papers :—

Sessional Paper XXI. of 1882.—Colombo Harbour Works : Statements regarding the value of work done to date, and the estimated cost of the additional work necessary to complete the improvements to the Colombo Harbour.

Sessional Paper XXII. of 1882.—Report of the Commissioners appointed "to inquire and report (*a*) How many patients can be accommodated in the buildings at the new Lunatic Asylum already completed or under construction, and (*b*) What temporary modifications of the plans or additions thereto are desirable in order to accommodate the greatest number of patients in the buildings."

Sessional Paper XXIII. of 1882.—Revised Code for Aided Schools, 1883, together with a notification of amendments, prepared by the Director of Public Instruction.

Administration Reports (1881), Part IV., Miscellaneous :—

Report of the Registrar-General of Lands and of Marriages, Births, and Deaths.

5. PETITION.—The Hon. W. W. Mitchell presented a petition from certain proprietors and managers of the plumbago pits of Udakandewela, Mípitiya, Kotuhéna, Pitakanda, and Udattapola, and certain inhabitants of the Ihalawisideké Kóralé, in the North-Western Province, praying for the construction of certain branch roads and the establishment of a Post Office at Dodangastenna.

Petition read and ordered to lie on the table.

6. SCHEDULE OF PORT, TONNAGE, AND HARBOUR AND WAREHOUSE DUES.—The Hon. W. W. Mitchell gave notice of the following question :—

"To ask if, in accordance with the recommendations of the Chamber of Commerce, Government will consent to modify the Schedule of Port, Tonnage, and Harbour and Warehouse Dues to be levied from 1st January, 1883, in the following manner :—

(1) *Transhipment Goods* to be free ; if landed, no rent to be charged till after five days, when rent will be charged on the existing scale.

(2) *Re Exports* paying dues inwards, to be free from dues outwards.

(3) *Five days* to be understood to mean, 'or part thereof, with a further similar charge for every five days,' after words or 'part thereof.'

(4) *Additional Charges* for port dues to be calculated on a vessel's stay in port exceeding 96 hours and 288 hours only.

(5) *Coal* to be exempt from dues.

(6) *Mail Steamers* to be allowed to compound for port dues."

The Lieutenant-Governor having obtained leave of Council replied to the question.

7. RETURN OF TONNAGE INWARDS AND OUTWARDS AT THE PORT OF COLOMBO.—The Hon. W. W. Mitchell, pursuant to notice, moved for a return of the tonnage inwards and outwards at the port of Colombo in the years 1879, 1880, and 1881, and during the three months of the current year ending 30th September.

Seconded by the Hon. J. VanLangenberg.

The Lieutenant-Governor replied and laid on the table the desired return.

8. GEM LICENSING ORDINANCE, 1882.—On the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, the Bill was recommitted. The Lieutenant-Governor having reported the Bill as amended, the report was adopted, and the Bill was ordered to be again referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

9. LOCAL BOARDS BILL.—The report of the Law Officers of the Crown, dated 24th October, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, read a third time and passed.

10. VILLAGE COMMUNITIES ORDINANCE AMENDMENT BILL.—The Lieutenant-Governor brought up the report of the Sub-Committee on the Bill, which was read by the Clerk of the Council. The Lieutenant-Governor having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

11. TENANCY BILL.—On the motion of the Hon. P. Ráma-Náthan, seconded by the Hon. J. VanLangenberg, the Bill was read a second time, and the Council having gone into Committee thereon, the Bill was ordered to be referred to a Sub-Committee consisting of the Queen's Advocate, the Treasurer, the Government Agent, Western Province, the Hon. J. VanLangenberg, the Hon. P. Ráma-Náthan, and the Hon. A. L. De Alwis.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned to Wednesday the 8th instant, at 3 P.M.

Wednesday, 8th November, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.

2. OATH.—The Hon. E. J. Young took the usual oath as a Member of Council.

3. Proceedings of the last meeting read.

4. ASSENT TO BILL.—The Lieutenant-Governor announced that His Excellency the Governor had given his assent to Ordinance No. 6 of 1882, intituled "An Ordinance to remove doubts as to certain powers of Local Boards under 'The Local Boards of Health and Improvement Ordinance, 1876.'"

5. PAPERS.—The Lieutenant-Governor laid on the table the following Papers:—

Administration Reports (1881), Part IV., Miscellaneous:—
Report on the Colombo Museum.

Correspondence respecting a proposed new Railway Station at the Fort, Colombo.

6. GRAIN TAX ORDINANCE No. 11 OF 1878.—The Hon. A. L. De Alwis gave notice that at the next meeting of Council he would call attention to the Grain Tax Ordinance No. 11 of 1878, and move that it is expedient to amend it in certain respects.

7. ORDINANCE TO AMEND THE LAW RELATING TO THE REGISTRATION OF MARRIAGES, BIRTHS, AND DEATHS.—The Hon. P. Ráma-Náthan gave notice that at the next meeting of Council he would ask

"Whether, and if so, why, the Government have withdrawn the draft of a proposed Ordinance to amend the law relating to the regulation of Marriages, Births, and Deaths; and move for papers."

8. CEYLONESE IN THE CEYLON CIVIL SERVICE.—The Hon. P. Ráma-Náthan gave notice that at the next meeting of Council he would ask

"Why the Ceylonese in the Ceylon Civil Service are not appointed to revenue offices, and move for a return showing the revenue appointments, if any, held by them during the last ten years."

9. COLOMBO HARBOUR WORKS.—The Hon. the Government Agent, Western Province, gave notice of the following motion for a future date:—

"To invite attention to the Sessional Paper No. XXI. of 1882 (Colombo Harbour Works), and to move 'That having regard to the large savings made on the estimates for the construction of the Northern Arm of the Breakwater, of the consequent reduction which may certainly be anticipated in the cost of the Northern Arm if undertaken at once, and in view of the opinion so repeatedly expressed by the Consulting Engineer, Sir John Coode, that it is absolutely impossible to provide by a single arm, however placed, such protection as ought to be afforded, this Council is of opinion that the construction of the Northern Arm, according to Sir J. Coode's plan, should be commenced in ordinary course without delay.'"

10. REPAIRS OR ADDITIONS TO CHURCH OF ENGLAND CHURCHES AND FABRICS.—The Hon. W. W. Mitchell gave notice that at the next meeting of Council he would

"Move for a return showing the amount expended by Government in each of the last three years in the maintenance, repairs, or additions to Church of England Churches, or fabrics connected therewith, throughout the Island."

11. HARBOUR RECEIPTS.—The Hon. the Government Agent, Central Province, pursuant to notice, moved for a return showing the estimated receipts, based on the shipping trade and imports of 1881, to be derived from all dues levied at the port of Colombo under the rules to come into force on the 1st of January, 1883, distinguishing dues levied on tonnage from dues levied on imported goods, with a statement comparing approximately the estimated receipts under each head in 1883 with the actual receipts of 1881.

Seconded by the Principal Collector of Customs.

The Colonial Secretary replied.

—Motion agreed to.

12. GEM LICENSING ORDINANCE, 1882.—The report of the Law Officers of the Crown, dated the 6th November, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, read a third time and passed.

13. VILLAGE COMMUNITIES ORDINANCE AMENDMENT BILL.—The report of the Law Officers of the Crown, dated the 6th November, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, read a third time and passed.

14. THE MEDICAL WANTS ORDINANCE AMENDMENT ORDINANCE, 1881.—The Lieutenant-Governor moved, and the Queen's Advocate seconded, the second reading of the Bill.

The Hon. E. J. Young moved, and the Hon. W. W. Mitchell seconded, the following amendment: "That the second reading take place this day two months."

THE COUNCIL DIVIDED.

Ayes.	*Noes.*
The Hon. E. J. Young,	The Hon. A. L. De Alwis,
The Hon. W. W. Mitchell.	The Hon. P. Ráma-Náthan,
	The Hon. J. Van Langenberg,
	The Principal Collector of Customs,
	The Surveyor-General,
	The Government Agent, Central Province,
	The Government Agent, Western Province.
	The Treasurer,
	The Auditor-General,
	The Queen's Advocate,
	The Major-General,
	The Lieutenant-Governor,
	His Excellency the Governor.

Ayes 2; Noes 13; Majority 11.—Amendment lost.

The motion was then put and carried.

On the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, the Council went into Committee on the Bill, and in Committee thereon, the Bill was ordered to be referred to a Sub-Committee consisting of the Lieutenant-Governor, the Queen's Advocate, the Government Agent, Central Province, the Hon. P. Ráma-Náthan, the Hon. W. W. Mitchell, and the Hon. E. J. Young.

15. FRENCH MAIL STEAMERS BILL.—On the motion of the Lieutenant-Governor, seconded by the Queen's Advocate, the Bill intituled "An Ordinance to make temporary provision for securing the Status of French Mail Steamers within the ports of this Colony" was read a first time, and the second reading fixed for the next meeting of Council.

16. TOLLS BILL.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance to establish further Tolls" was read a first time, and the second reading fixed for next meeting of Council.

17. TELEPHONES ORDINANCE.—On the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance to authorize and regulate the use of Telephones in this Island" was read a first time, and the second reading fixed for three weeks hence.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned till Wednesday, the 15th November, at 3 o'clock P.M.

Wednesday, 15th November, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.
2. Proceedings of the last meeting read.

3. ASSENT TO BILLS.—The Lieutenant-Governor announced that His Excellency the Governor had given his assent to the following Ordinances:—

No. 7 of 1882, intituled "An Ordinance to prevent unlicensed gemming upon Crown lands."

No. 8 of 1882, intituled "An Ordinance further to amend 'The Village Communities Ordinance, 1871.'"

4. PAPERS.—The Lieutenant-Governor laid on the table the following Papers:—

Sessional Paper XXV. of 1882.—Despatch from the Secretary of State requesting the prolongation for another year of Ordinance No. 7 of 1881, intituled "An Ordinance to make temporary provision for securing the status of French Mail Steamers within the ports of this Colony."

Administration Reports (1881), Part III., Judicial:—

Remarks and Statistics furnished by the Hon. the Queen's Advocate.

Report of the Inspector-General of Police.

Report of the Inspector-General of Prisons.

Part IV.—Miscellaneous:—

Report of the Postmaster-General and Director-General of Telegraphs.

Interim Report by the Select Committee appointed to consider and enquire into the Public Expenditure of this Colony, and to advise whether any, and if so, what savings can be effected in the annual charges included in the Estimates now before Council, due regard being had to vested interests and to the maintenance of the efficient administration of the Island.

5. FOUR-CENT POSTAGE STAMPS.—The Hon. F. M. Mackwood gave notice that at the next meeting of Council he would

"Move that the use of the four-cent Postage Stamp be authorized for all purposes for which the five-cent Receipt Stamp is now used."

6. RETRENCHMENT COMMITTEE.—The Lieutenant-Governor, pursuant to notice, moved that the Hon. the Surveyor-General and the Hon. E. J. Young be added to the Select Committee appointed by resolution of Council on the 11th October last.

Seconded by the Queen's Advocate.
—Carried.

7. ORDINANCE TO AMEND THE LAW RELATING TO THE REGISTRATION OF MARRIAGES, BIRTHS, AND DEATHS.—The Hon. P. Ráma-Náthan, pursuant to notice, asked whether, and if so, why, the Government have withdrawn the draft of a proposed "Ordinance to amend the law relating to the registration of Marriages, Births, and Deaths," and moved for papers.

Seconded by the Hon. A. L. De Alwis.
The Lieutenant-Governor replied.

8. CEYLONESE IN THE CEYLON CIVIL SERVICE.—The Hon. P. Ráma-Náthan, pursuant to notice, asked why the Ceylonese in the Ceylon Civil Service are not appointed to revenue offices, and moved for a return showing the revenue appointments, if any, held by them during the last ten years.

Seconded by the Hon. A. L. De Alwis.
The Lieutenant-Governor replied.
—Motion agreed to.

9. REPAIRS AND ADDITIONS TO CHURCH OF ENGLAND CHURCHES AND FABRICS.—The Hon. W. W. Mitchell, pursuant to notice, moved for a return showing the amount expended by Government in each of the last three years in the maintenance, repairs, or additions to Church of England Churches, or fabrics connected therewith, throughout the Island.

Seconded by the Hon. A. L. De Alwis.

The Lieutenant-Governor replied, and laid on the table the return called for.

10. GRAIN TAX ORDINANCE No. 11 OF 1878.—The Hon. A. L. De Alwis, pursuant to notice, called attention to the Grain Tax Ordinance No. 11 of 1878, and moved that it was expedient to amend it in certain respects.

Seconded by the Hon. P. Ráma-Náthan.
The Lieutenant-Governor replied.

THE COUNCIL DIVIDED.

Ayes.	*Noes.*
The Hon. E. J. Young,	The Surveyor-General,
The Hon. A. L. De Alwis,	The Government Agent, Central Province,
The Hon. W. W. Mitchell,	The Government Agent, Western Province,
The Hon. F. M. Mackwood,	The Treasurer,
The Hon. P. Ráma-Náthan.	The Auditor-General,
	The Queen's Advocate,
	The Lieutenant-Governor,
	His Excellency the Governor.

Ayes 5; Noes 8; Majority 3.—Motion lost.

11. RETURN OF SALARIES PAID TO OFFICERS AND CLERKS EMPLOYED BY THE PUBLIC WORKS DEPARTMENT.—The Hon. E. J. Young, pursuant to notice, moved for a return showing the amount of salaries paid to all Officers and Clerks employed by the Public Works Department, and also the amount of money expended in works of any kind carried out by the same Department during the year 1881.

Seconded by the Hon. W. W. Mitchell.

The Lieutenant-Governor replied.

—Motion agreed to.

12. SUPPLEMENTARY SUPPLY BILL, 1882.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1882," was read a first time, and the second reading fixed for the next meeting of Council.

13. FINAL SUPPLEMENTARY SUPPLY BILL, 1881. On the motion of the Auditor-General, seconded by the Lieutenant-Governor, the Bill intituled "An Ordinance for making final provision for the Supplementary Contingent charges for the year 1881," was read a first time, and the second reading fixed for the next meeting of Council.

14. FRENCH MAIL STEAMERS BILL.—The Lieutenant-Governor obtained permission of Council to defer the motion of which he had given notice for the second reading of this Bill.

15. TOLLS BILL.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a second time, and the Council went into Committee thereon. In Committee it was resolved, on the motion of the Lieutenant-Governor, to *Gazette* the proposed additions to the Bill, and to consider the Bill in Committee on the 29th November.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned till Wednesday, the 22nd November, at 3 o'clock P.M.

Wednesday, 22nd November, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.

2. Proceedings of the last meeting read.

3. PAPER.—The Lieutenant-Governor laid on the table the following Paper:—

Return to an Order of the Legislative Council, dated 8th November, 1882: "That a return showing the estimated receipts, based on the shipping trade and imports of 1881, to be derived from all dues levied at the port of Colombo under the rules to come into force on the 1st of January, 1883, distinguishing dues levied on tonnage from dues levied on imported goods, with a statement comparing approximately the estimated receipts under each head in 1883 with the actual receipts of 1881, be furnished."

4. FOURTH JUDGESHIP ON THE SUPREME COURT BENCH.—The Hon. P. Ráma-Náthan, pursuant to notice, asked if the Judges of the Supreme Court, or any of them, had recommended to the Government or to the Secretary of State the advisability of appointing a Civilian of the Ceylon Civil Service to the fourth seat on the Supreme Court Bench, the creation of which they desired by their letter last laid on the table.

The Lieutenant-Governor replied.

5. GRANT-IN-AID ROAD FROM GINIGATHÉNA GAP TO DIMBULA JUNCTION.—The Hon. E. J. Young, pursuant to notice, moved that the grant-in-aid road from Ginigathéna Gap to Dimbula junction be taken over and kept up by Government as a main thoroughfare.

Seconded by the Hon. W. W. Mitchell.

The Lieutenant-Governor replied.

—Motion by leave withdrawn.

6. MEDICAL WANTS ORDINANCE AMENDMENT ORDINANCE, 1881.—The Lieutenant-Governor brought up the report of the Sub-Committee on the Bill, which was read by the Clerk of the Council. The Lieutenant-Governor having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

7. TENANCY BILL.—The Hon. P. Ráma-Náthan brought up the report of the Sub-Committee on the Bill, which was read by the Clerk of the Council. The Hon. P. Ráma-Náthan having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

8. SUPPLEMENTARY SUPPLY BILL, 1882.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a second time, and the Council having gone into Committee thereon, the Bill was ordered to be referred to a Sub-Committee consisting of the Lieutenant-Governor, the Auditor-General, the Treasurer, the Hon. P. Ráma-Náthan, the Hon. W. W. Mitchell, and the Hon. A. L. De Alwis.

9. SUPPLY BILL, 1883.—The Lieutenant-Governor brought up the report of the Sub-Committee on the Bill, which was read by the Clerk of the Council. The Lieutenant-Governor having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

10. FINAL SUPPLEMENTARY SUPPLY BILL, 1881.—On the motion of the Auditor-General, seconded by the Lieutenant-Governor, the Bill was read a second time and considered in Committee. The Auditor-General having reported the Bill unamended, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

11. FRENCH MAIL STEAMERS BILL.—The Lieutenant-Governor moved, and the Auditor-General seconded, the second reading of the Bill—

THE COUNCIL DIVIDED.

Ayes.	*Noes.*
The Principal Collector of Customs,	The Hon. E. J. Young,
The Surveyor-General,	The Hon. A. L. De Alwis,
The Government Agent, Central Province,	The Hon. W. W. Mitchell,
The Government Agent, Western Province,	The Hon. P. Ráma-Náthan,
The Treasurer,	The Hon. J. VanLangenberg.
The Auditor-General,	
The Lieutenant-Governor,	
His Excellency the Governor.	

Ayes 8; Noes 5; Majority 3.—Motion carried.

The Bill was then read a second time and considered in Committee. The Lieutenant-Governor having reported the Bill without amendment, the report was adopted and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned till Wednesday, the 29th November, at 3 o'clock P.M.

Wednesday, 29th November, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.

2. Proceedings of the last meeting read.

3. PAPERS.—The Lieutenant-Governor laid on the table the following papers:—

   Census Report, 1881.

   Administration Reports (1881), Part IV., Miscellaneous:—

   Report on the Government Printing Office.

   Letter from the Government Agent, Central Province, No. 1,648, of the 21st November, relative to certain alleged sales of paddy fields under the revenue laws in the Central Province.

4. FOUR-CENT POSTAGE STAMPS.—The Hon. W. W. Mitchell having obtained leave of Council to amend the motion standing in his name, moved the following amended motion:—

   "That it is expedient that the use of four-cent Postage Stamps be legalized for all purposes for which five-cent stamps are now used."

   Seconded by the Hon. A. L. De Alwis.

   The Lieutenant-Governor replied.

   —Motion by leave withdrawn.

5. PETITION.—The Government Agent, Western Province, presented a petition from certain owners of property in the district of Negombo praying for the retention of the Assistant Agency at that station.

   Petition read and ordered to lie on the table.

6. LETTER ADDRESSED TO HAPUTALÉ PLANTERS' ASSOCIATION.—The Lieutenant-Governor read and laid on the table copy of a letter addressed to the Haputalé Planters' Association on the subject of the proposal to sell the Hospital.

7. THE MEDICAL WANTS ORDINANCE AMENDMENT ORDINANCE, 1881.—The report of the Law Officers of the Crown, dated the 28th November, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Auditor-General, read a third time and passed.

8. SUPPLY BILL, 1883.—The report of the Law Officers of the Crown, dated the 28th November, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the

motion of the Lieutenant-Governor, seconded by the Auditor-General, read a third time and passed.

9. TENANCY BILL.—The report of the Law Officers of the Crown, dated the 28th November, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, read a third time and passed.

10. FINAL SUPPLEMENTARY SUPPLY BILL, 1881.—The report of the Law Officers of the Crown, dated the 28th November, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Auditor-General, seconded by the Lieutenant-Governor, read a third time and passed.

11. FRENCH MAIL STEAMERS BILL.—The report of the Law Officers of the Crown, dated the 28th November, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Auditor-General, read a third time and passed.

12. SUPPLEMENTARY SUPPLY BILL, 1882.—The Lieutenant-Governor brought up the report of the Sub-Committee on the Bill, which was read by the Clerk of the Council. The Lieutenant-Governor having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

13. TOLL ORDINANCE.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was read a third time and considered in Committee. The Lieutenant-Governor having reported the Bill as amended, the report was adopted. On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the standing orders were then suspended, and the Bill was read a third time and passed.

14. TELEPHONES BILL.—On the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, the Bill was read a second time and considered in Committee. The Queen's Advocate having reported the Bill with amendments, the report was adopted, and the Bill ordered to be referred to the Law Officers of the Crown, the third reading being fixed for the next meeting of Council.

On the motion of the Lieutenant-Governor, the Council at its rising adjourned to Wednesday, the 13th December, at 4 o'clock P.M.

Wednesday, 13th December, 1882.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.

2. Proceedings of the last meeting read.

3. ASSENT TO BILLS.—The Lieutenant-Governor announced that His Excellency the Governor had given his assent to the following Ordinances:—

No. 9 of 1882, intituled "An Ordinance to amend 'The Medical Wants Ordinance, 1880, and to repeal The Medical Wants Ordinance, 1880, Amendment Ordinance, 1881.'"

No. 10 of 1882, intituled "An Ordinance for making provision for the Contingent Services for the year 1883."

No. 11 of 1882, intituled "An Ordinance to facilitate the recovery of possession of Tenements after due determination of the Tenancy."

No. 12 of 1882, intituled "An Ordinance for making final provision for the Supplementary Contingent Charges for the year 1881."

No. 13 of 1882, intituled "An Ordinance for continuing the Ordinance No. 7 of 1881, intituled 'An Ordinance to make temporary provision for securing the status of French Mail Steamers within the ports of this Colony.'"

No. 14 of 1882, intituled "An Ordinance to establish Further Tolls and to discontinue certain Tolls."

4. PAPERS.—The Lieutenant-Governor laid on the table the following Papers:—

Correspondence on the subject of the Revised Code for Aided Schools.

Despatch No. 275 of the 21st August last from the Secretary of State for the Colonies, reporting grant of leave of absence on full pay to the Queen's Advocate.

5. RAILWAY EXTENSION FROM NÁWALAPITIYA TO NÁNU-OYA.—The Government Agent, Central Province, gave notice of the following motion for next meeting of Council:—

"To move that measures be adopted to raise a special fund to meet the interest and sinking fund on the extension of the Railway from Náwalapitiya to Nánu-oya, and the loss, if any, on the cost of working that extension until such time as its receipts shall cover the charges for interest, sinking fund, and cost of working."

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6. Fort Railway Station.—The Lieutenant-Governor, pursuant to notice, moved that it was desirable that the new Fort Railway Station be erected at the site near the Lotus Pond upon a continuation of Chatham-street, as shown in the plans now before Council, and that the cost of the station and of the continuation of Chatham-street be defrayed from the Railway Construction Fund.

Seconded by the Queen's Advocate.

—Carried.

7. Agri-Horticultural Shows.—The Hon. A. L. De Alwis, pursuant to notice, moved that it was desirable to hold Agri-Horticultural Shows annually throughout the Island, and that at every Government Agency and Assistant Government Agency, the Agent or Assistant Agent, as the case may be, be required to organize such annual exhibitions, offering small money prizes for competition.

Seconded by the Hon. E. J. Young.

The Lieutenant-Governor replied.

—Motion by leave withdrawn.

8. 3rd-Class Railway Return Tickets.—The Hon. A. L. De Alwis, pursuant to notice, moved that it was desirable in the interests of the public to grant to 3rd-class passengers the same privileges as to return tickets as are now enjoyed by 1st and 2nd-class passengers on the Government Railways of this Island.

Seconded by the Hon. J. VanLangenberg.

The Lieutenant-Governor replied.

The Council Divided.

Ayes.	*Noes.*
The Hon. E. J Young,	The Principal Collector of Customs,
The Hon. A. L. De Alwis,	The Government Agent, Central Province,
The Hon. W. W. Mitchell,	The Treasurer,
The Hon. J. VanLangenberg,	The Auditor-General,
The Surveyor-General,	The Queen's Advocate,
The Government Agent, Western Province.	The Major-General,
	The Lieutenant-Governor,
	His Excellency the Governor.

Ayes 6; Noes 8; Majority 2.—Motion lost.

9. Pettah Railway Station.—The Hon. A. L. De Alwis, pursuant to notice, moved that, considering the great inconvenience felt by the large number of passengers congregating daily at the Pettah Railway Station, by reason of its limited accommodation, it was desirable that immediate steps should be taken to enlarge the said station or otherwise improve it.

Seconded by the Hon. W. W. Mitchell.

The Lieutenant-Governor replied.

—Motion by leave withdrawn.

10. Advances.—The Government Agent, Central Province, pursuant to notice, moved for a return of all "Advances" made in 1881 and previous years which remained outstanding when the accounts of 1881 were closed, with the dates of advance, particulars of advance, and expected source of repayment.

Seconded by the Principal Collector of Customs.

The Lieutenant-Governor replied.

—Motion agreed to.

11. Theft of Plants and Bark of Cinchona from Estates.—The Hon. E. J. Young, pursuant to notice, drew attention to the prevalence of theft of plants and bark of Cinchona from estates, and of bark by cartmen in transit, and the necessity for a protective measure of legislation for this and other new products, and moved for papers.

Seconded by the Hon. W. W. Mitchell.

The Lieutenant-Governor replied.

—Motion by leave withdrawn.

12. Supplementary Supply Bill, 1882.—On the motion of the Lieutenant-Governor, seconded by the Auditor-General, the Bill was recommitted and amended. The report of the Law Officers of the Crown, dated the 5th December, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Lieutenant-Governor, seconded by the Auditor-General, read a third time and passed.

13. Telephones Bill.—The report of the Law Officers of the Crown, dated the 5th December, stating that there was in their opinion no legal impediment to the execution by the Colonial Tribunals of a law in terms of the Bill, having been read, the Bill was, on the motion of the Queen's Advocate, seconded by the Lieutenant-Governor, read a third time and passed.

14. ASSENT TO BILLS.—The Lieutenant-Governor then announced that His Excellency the Governor had given his assent to the following Ordinances :—

No. 15 of 1882, intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1882."

No. 16 of 1882, intituled "An Ordinance to authorize and regulate the use of Telephones in this Island."

On the motion of the Lieutenant-Governor, the Council at its rising adjourned *sine die*.

Wednesday, 14th February, 1883.

1. The Council met pursuant to adjournment. His Excellency the Governor took the chair.

2. Proceedings of the last meeting read.

3. PAPERS.—The Lieutenant-Governor laid on the table the following papers :—

Sessional Paper XXXI. of 1882.—Return to an Order of the Legislative Council, dated the 8th November, 1882 : "That a return showing the estimated receipts, based on the shipping trade and imports of 1881, to be derived from all dues levied at the port of Colombo under the rules to come into force on the 1st of January, 1883, distinguishing dues levied on tonnage from dues levied on imported goods, with a statement comparing approximately the estimated receipts under each head in 1883 with the actual receipts of 1881, be furnished."

Sessional Paper XXXII. of 1882.—Further Papers relating to the Colombo Harbour Works.

Sessional Paper XXXIII. of 1882.—Correspondence respecting a prosecution under the Kandyan Marriage Law.

Sessional Paper XXXIV. of 1882.—Financial Statements laid before the Legislative Council during the Session of 1882.

Sessional Paper XXXV. of 1882.—Railway Extension towards Uva : Further Correspondence relating to the Haputalé Section.

Sessional Paper XXXVI. of 1882.—Letter from the Senior Puisne Justice on Sir J. Phear's Draft Criminal Procedure Code.

4. ADVANCES.—The Government Agent, Central Province, pursuant to notice, asked, when, and from what funds, the following advances will be repaid :—

1879.—Railway Extension ...	Rs.	44,480	93
1880.—Mátalé Railway (balance outstanding)	„	105,780	73
1881.— Do. (do.)	„	50,255	56

The Lieutenant-Governor replied.

5. NÁNU-OYA RAILWAY.—The Government Agent, Central Province, asked for leave to withdraw the following motion of which he had given notice :—

"That measures be adopted to raise a special fund to meet the interest and sinking fund on the extension of the railway from Náwalapitiya to Nánu-oya, and the loss, if any, on the cost of working that extension until such time as its receipts shall cover the charges for interest, sinking fund, and cost of working."

THE COUNCIL DIVIDED.

Ayes.	*Noes.*
The Principal Collector of Customs,	The Hon. J. L. Shand,
The Government Agent, Central Province,	The Hon. W. W. Mitchell,
The Government Agent, Western Province,	The Hon. P. Ráma-Náthan,
The Treasurer,	The Hon. J. VanLangenberg.
The Auditor-General,	
The Queen's Advocate,	
The Major-General,	
The Lieutenant-Governor.	

Ayes 8 ; Noes 4 ; Majority 4.—Motion withdrawn.

6. BREAKWATER WORKS.—The Government Agent, Western Province, pursuant to notice, invited attention to the Sessional Paper No. XXI. of 1882 (Colombo Harbour), and moved that, having regard to the large savings made on the estimates for the construction of the northern arm of the Breakwater, of the consequent reduction which may certainly be anticipated in the cost of the northern arm if undertaken at once, and in view of the opinion so repeatedly expressed by the Consulting Engineer, Sir J. Coode, that it is absolutely impossible to provide by a single arm, however placed, such protection as ought to be afforded, this Council is of opinion that the

construction of the northern arm, according to Sir J. Coode's plan, should be commenced in the ordinary course without delay.

Seconded by the Hon. W. W. Mitchell.

The Lieutenant-Governor replied.

—Motion by leave withdrawn.

7. Revised Harbour Revenue.—The Hon. W. W. Mitchell, pursuant to notice, moved that the revised returns of harbour revenue prepared by the Chamber of Commerce be laid on the table and printed as a Sessional Paper.

Seconded by the Hon. F. M. Mackwood.

The Lieutenant-Governor replied.

—Motion agreed to.

8. Convict Labour.—The Hon. W. W. Mitchell, pursuant to notice, asked in what manner Government intend to find occupation for the convict labour now employed at the Breakwater and at Mahara when the southern arm of the Breakwater is completed, and moved for papers.

Seconded by the Hon. F. M. Mackwood.

The Lieutenant-Governor replied.

9. Reclamation Land.—The Hon. F. M. Mackwood, pursuant to notice, moved for a return of lots of land on the harbour reclamation which have already been alienated for coaling and other purposes, their areas, annual rentals, and periods for which they are rented; also asked if any further lots have been reserved or promised, if so, their areas, for what purposes, and upon what terms.

Seconded by the Hon. W. W. Mitchell.

The Lieutenant-Governor replied and laid on the table the returns called for.

10. Reclamation Land.—The Hon. F. M. Mackwood, pursuant to notice, moved that no further alienation or reservation of land (except for coaling purposes) be made, without advertisement, and subject to public competition.

Seconded by the Hon. W. W. Mitchell.

The Lieutenant-Governor replied.

—Motion by leave withdrawn.

11. Road Ordinance Commission.—The Hon. P. Ráma-Náthan obtained leave of the Council to withdraw the following motion of which he had given notice:—

"To ask why the Government submitted the Report of the Road Ordinance Commissioners to the consideration and criticism of the very officers whose views were taken and dealt with by the said Commissioners, and to point out the injudiciousness of that act; also to move for papers."

12. Pettah Railway Station.—The Hon. J. VanLangenberg asked for leave of Council to at once make the following motion:—

"That, considering the great inconvenience felt by the large number of passengers congregating daily at the Pettah Railway Station, by reason of its limited accommodation, it is desirable that immediate steps should be taken to enlarge the said station or otherwise improve it."

Seconded by the Hon. W. W. Mitchell.

The Council Divided.

Ayes.	*Noes.*
The Hon. W. W. Mitchell,	The Hon. J. L. Shand,
The Hon. F. M. Mackwood,	The Government Agent, Central Province.
The Hon. P. Ráma-Náthan,	
The Hon. J. VanLangenberg,	
The Principal Collector of Customs,	
The Government Agent, Western Province,	
The Treasurer,	
The Auditor-General,	
The Queen's Advocate,	
The Major-General,	
The Lieutenant-Governor,	
His Excellency the Governor.	

Ayes 12; Noes 2; Majority 10.—Motion carried. Leave granted.

The Hon. J. VanLangenberg then moved the following motion:—

"That, considering the great inconvenience felt by the large number of passengers congregating daily at the Pettah Railway Station, by reason of its limited accommodation, it is desirable that immediate steps should be taken to enlarge the said station or otherwise improve it."

Seconded by the Hon. W. W. Mitchell.

THE COUNCIL DIVIDED.

Ayes.	*Noes.*
The Hon. W. W. Mitchell,	The Hon. J. L. Shand,
The Hon. F. M. Mackwood,	The Government Agent, Central Province.
The Hon. P. Ráma-Náthan,	
The Hon. J. VanLangenberg,	
The Principal Collector of Customs,	
The Government Agent, Western Province,	
The Treasurer,	
The Auditor-General,	
The Queen's Advocate,	
The Major-General,	
The Lieutenant-Governor,	
His Excellency the Governor.	

Ayes 12 ; Noes 2 ; Majority 10.—Motion carried.

13. BREAKWATER DEBENTURE BILL.—In Committee on the Bill intituled "An Ordinance for the raising by debentures of a further sum of £150,000 sterling for the improvement of the Harbour of Colombo," the Lieutenant-Governor brought up the report of the Sub-Committee, which was read by the Clerk of the Council.

The Lieutenant-Governor then moved that the Bill be discharged.

Seconded by the Auditor-General.

—Carried. Bill discharged.

14. CLOSING OF SESSION.—His Excellency the Governor then concluded the Session with the following Address :—

HONOURABLE GENTLEMEN OF THE LEGISLATIVE COUNCIL,

THE time has now arrived when I am able to declare the present Session at an end.

2. Your attention has of necessity been devoted chiefly to measures of finance and to the essential obligation of bringing the annual expenditure within the limit of the reduced revenue. In thanking you for the supplies that you have voted, I am especially gratified that you have been able to devote so large a sum as a hundred thousand rupees to irrigation works. This vote will enable the Government to fulfil the promises held out to the people, that if they by their own labour repaired their tanks, the Government would provide sluices. It will, I hope, hereafter be possible to provide by loans for carrying out the restoration of some of the ancient irrigation works which gave fertility to whole districts, and which, if restored, would yield a revenue more than sufficient to meet the cost.

3. The thanks of the Government are due to the Select Committee of this Council, appointed at the commencement of the Session to enquire into the public expenditure and advise how it can be reduced, for the full and exhaustive Report which has been laid on the table to-day. In this Report and the papers which accompany it extensive alterations are proposed in the Civil Establishment of the Colony which I cannot under our constitution present to you for legislative adoption without the previous sanction of the Secretary of State, who has already approved the appointment of the Select Committee. It is not my province now to anticipate the decision of Her Majesty's Government upon the several measures proposed in this Report. The Secretary of State is aware of the paramount necessity of keeping the expenditure well within the limits of the revenue, and the proposals made in the Report will receive the earnest consideration due to the opinions of a Committee representing almost the whole Council.

4. The decision at which the Council has arrived in regard to the Colombo Harbour Works is in accordance with the declared intention of the Council from the first, that the amount to be expended should be governed by the amount of the revenue likely to be raised in the Port, with a certain definite aid from the general revenue. It is clear that this latter aid cannot be increased, and the port dues must necessarily be limited to such moderate rates as the shipping interest are willing to pay for the protection afforded by the Harbour Works. Even without the north arm the Colombo breakwater will be a standing memorial of the genius of the Consulting Engineer, Sir John Coode, and of the admirable skill and energy with which his designs were carried out by Mr. Kyle.

5. From communications which I have received from the Government of Queensland and from the emigrants who went to Queensland, I am afraid that great disappointment has been caused to our people. It is hardly possible, indeed, that the emigrants could pass from a land so highly blessed by nature as Ceylon to a foreign country of which they knew almost nothing without disappointment; and the prospects of the emigrants may perhaps improve when they get used to the country, the climate, and, above all, the work they have to do. But in the meanwhile all further emigration is prohibited, and the Secretary of State has instructed me not to issue any Proclamation under the Emigration Ordinance passed in this Session without his consent.

6. Since our last meeting the Colony has suffered a great loss in the enforced retirement of the Chief Justice on account of the failure of his health. Sir Richard Cayley was for several years one of the most distinguished Members of this Council. He left the Council to preside in the Supreme Court, and in the high office of Chief Justice of Ceylon he displayed in a more important sphere the qualities which, in his earlier career, had gained for him the confidence and esteem of all ; of the Governments under which he served ; of the Bar where he practised so long ;

and of the people generally. Sir Richard Cayley will, I am sure, carry with him the good wishes and hearty respect of this Council.

7. I trust that we may be permitted to meet again at an early day to pass that great measure of Law Reform, the Penal Code, the draft of which was prepared by Sir Richard Cayley before his illness, and has been completed in England by Mr. Burnside.

I now close this Session, and trust that the present year may, under the Divine blessing, be more prosperous than the last, and that peace and contentment may prevail unchecked through the land.

SESSIONAL PAPERS, 1882.

I.—1882.

FURTHER PAPERS

RELATING TO THE

COLOMBO WATERWORKS.

(In continuation of Sessional Paper No. XX. of 1881.)

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

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COLOMBO WATERWORKS.

No. 1.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.—No. 307. Downing-street, 21st September, 1881.

SIR,—WITH reference to your despatch No. 188 of the 16th of July, on the subject of the Colombo Waterworks, I have the honour to transmit to you a copy of a letter from the Crown Agents, enclosing a copy of a letter from Mr. Bateman in explanation of the excess of the cost of the road to the Labugama reservoir over the estimate, to which you drew attention in your despatch.

I have approved Mr. Burnett's appointment as Chief Resident Engineer on the terms proposed, and of his proceeding to the Colony at the time suggested by the Crown Agents.

I have, &c.,
KIMBERLEY.

Enclosure in No. 1.

The CROWN AGENTS to the UNDER SECRETARY OF STATE, Colonial Office.

Downing-street, London,
1st September, 1881.

Colombo Waterworks.

SIR,—IN reply to your letter of the 18th ultimo, respecting the Colombo Waterworks, I have the honour to enclose, for the information of the Earl of Kimberley, a copy of a letter which we have received from the Consulting Engineer, explaining that the difference between his estimate of the cost of the local works already undertaken, and the actual expenditure thereon, is due to the fact that the road, which has been constructed to the site of the Labugama reservoir, is of very different character to what he anticipated.

With regard to the appointment of the Chief Resident Engineer, Mr. Bateman nominates Mr. Burnett, who, it will be remembered, was the gentleman who was employed by Mr. Bateman to make the preliminary surveys, &c., when the scheme of water-supply to Colombo was first proposed. As Mr. Burnett is willing to go out at a salary of £1,250, which we should propose to express as Rs. 15,000 in the agreement with him, we recommend that his services should be accepted.

We think that it would be a needless expenditure for the Resident Engineer to be in the Colony during the three months prior to the making of the contract, and we should propose, if Mr. Burnett's appointment meets with the approval of Lord Kimberley, to arrange for him to go out shortly before the contract is signed, which is not likely to take place until the middle of December.

The appointment of the Assistant Engineers will be a matter for after consideration, as Mr. Bateman recommends that the nomination of such assistants should be left to the Chief Resident Engineer. Due regard, however, will be had to the proposal that one of the appointments should be filled by an officer on the staff of the Public Works Department of the Colony.

With special reference to the concluding paragraph of your letter of the 2nd June, I enclose a copy of one which we addressed to Mr. Bateman on the 9th of that month, on the subject, amongst other things, of the salary of the Resident Engineer.

I take this opportunity of mentioning that the preparation of the draft contract and the lithographing of the drawings necessary for the purpose of tenders for the construction of these works has occupied a much longer time than was expected, but we have now received the prints of the contract, specifications, &c., and we hope to receive the drawings before the end of the week so as to be in a position to advertise for tenders in next week's papers.

I have, &c.,
E. E. BLAKE.

Sub-Enclosure No. 1 in Enclosure in No. 1.

Mr. BATEMAN to the CROWN AGENTS.

16, Great George-street, S.W.,
27th August, 1881.

GENTLEMEN,—I HAVE the honour to acknowledge your letter of the 22nd instant, enclosing copies of a letter from the Colonial Office and a despatch from the Lieutenant-Governor of Ceylon.

In explanation of the extra cost of the road to the Labugama reservoir, I have to observe that it was estimated, according to information received in the Island, at £800 per mile, the cost for such a road as was required having been stated to Mr. Burnett, when he was in Colombo, at from £600 to £800 per mile, and I am informed that such a road as was required could have been

STATEMENT *showing Details of Cost of Labugama Road on Estimate No. 642 of* 1880.

		Rs.	cts.
Clearing jungle ...	...	1,250	0
Earthwork in cuttings and embankments	...	47,756	50
Boulders (excavation) ...	..	8,328	0
Rocks (do.) ..	...	2,900	0
Retaining walls ..	...	2,600	0
Culverts ...	...	12,890	0
Bridges ...	...	45,395	59
Gravelling surface of road	...	10,308	0
Foundation for surface of road	...	6,582	62
Side-drains to road ..	...	1,382	0
		139,392	71
Lines for workmen ...	...	2,659	57
Compensation for land taken up for road	...	5,000	0
Contingencies ...	...	15,555	92
Total cost to date ...	...	162,608	20
Probable expenditure to complete work	...	6,161	30
Probable total Expenditure	...	168,769	50

No. 3.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.—No. 408. Downing-street, 26th December, 1881.

SIR,—I HAVE the honour to transmit to you for your information, with reference to previous correspondence on the subject of the Colombo Waterworks, the documents specified in the annexed schedule.

I have, &c.,
KIMBERLEY.

Date.	Description of Document.
16th December ...	The Crown Agents to the Colonial Office.
23rd Do. ...	The Colonial Office to the Crown Agents.
	Copy correspondence respecting a claim by the Contractors for the Colombo Waterworks for an extra payment on account of pipes supplied to replace breakages since the expiration of the contract.

Enclosure No. 1 in No. 3.

The CROWN AGENTS to the UNDER SECRETARY OF STATE, Colonial Office.

Ceylon. Downing-street,
London, 16th December, 1881.

SIR,—WITH reference to previous correspondence relating to the supply of cast iron pipes for the Colombo Waterworks, I have the honour to forward a copy of a letter from the contractors urging that, in consequence of the rise in price of pig iron, they are entitled to an extra payment for the pipes required to replace breakages which have been ordered since their contract expired. I also enclose a copy of the Consulting Engineer's report on this letter, in which he states that he considers that the contractors are entitled to an addition of from 7*s.* to 7*s.* 6*d.* a ton on the 1,500 tons of pipes ordered to replace breakages, but suggesting that an offer of £500 should be made to them.

The contractors are not in any way responsible for the replacement of the broken pipes, but under the contract we had the right to increase the monthly shipments of pipes by 20 per cent., and during the currency of the contract advantage was taken of this clause to obtain pipes required to replace breakages, at the exceptionally low contract prices. The contract ended in March, and the contractors are under no obligation to supply additional quantities, but as they possess the patterns of the special castings there is a distinct advantage in entrusting them with the order, and it appears to us that an allowance based on the rise in price of pig iron, such as is suggested by the Consulting Engineer, is a fair mode of determining the extra payment to be made to them.

We have accordingly to request that we may receive the Secretary of State's authority to incur this expenditure.

I have, &c.,
M. F. OMMANNEY.

Sub-Enclosure No. 1 in Enclosure No 1 in No. 3.

Mr. BATEMAN to the CROWN AGENTS.

16, Great George-street, Westminster, S.W.,
30th November, 1881.

Colombo Waterworks.

GENTLEMEN,—IN answer to your letter of the 27th October, accompanied by one from Messrs. Thomas Edington & Sons of the 22nd of the same month, I think the contractors for pipes are entitled to the extra price of pig iron since the conclusion of the period at which their contract ought to have ended—namely, March of this year. When they took their contract the price of pig iron was 40*s.* 6*d.* a ton. The average price since March this year has been, up to the present time, 48*s.* 1*d.* per ton. The weight of pipes ordered between April 1st and the present time, including special castings, is about 1,500 tons. I do not think that there has been any material alteration in any other prices than that of pig iron, and therefore the utmost that could be claimed by Messrs. Edington and Stewart would be the difference in the price of pig iron upon the quantity ordered since the period at which their contract should have terminated—namely, 1,500 tons, at 7*s.* 7*d.* They would probably be satisfied with a payment of £500 in addition to their contract price, although, I think, they are fairly entitled to an addition of about 7*s.* or 7*s.* 6*d.* a ton upon the weight of pipes they have manufactured since last March.

I have, &c.,
J. FRED. BATEMAN.

Sub-Enclosure No. 2 in Enclosure No. 1 in No. 3.

Messrs. THOMAS EDINGTON & SONS to the CROWN AGENTS.

Phœnix Works,
Glasgow, 22nd October, 1881.

Colombo Water.

GENTLEMEN,—WE have the honour to acknowledge receipt of your favour of yesterday, enclosing a statement of the number and particulars of pipes and special castings broken or short delivered ex "Charlotte Croom," which you desire to be replaced.

This we will have pleasure in attending to, and in the meantime we have applied to the Inspecting Engineer to ascertain what form of joint is required. We at same time venture to submit, whether, looking to the time that has elapsed since the contract was entered into, the changed state of the iron market, and all the circumstances of the case, it should not be left to the Consulting Engineer to say whether or not we should now be allowed some advance on the contract prices.

We have, &c.,
THOMAS EDINGTON & SONS.

Enclosure No. 2 in No. 3.

The UNDER SECRETARY OF STATE, Colonial Office, to the CROWN AGENTS.

Downing-street, 23rd December, 1881.

GENTLEMEN,—I AM directed by the Earl of Kimberley to acknowledge the receipt of your letter of the 16th instant, and to authorize you to offer to the contractors for the Colombo Waterworks the sum of five hundred pounds (£500) in satisfaction of their claim for extra payment on account of the pipes ordered to replace breakages since the expiration of the contract.

I am, &c.,
R. H. MEADE.

No. 4.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.—No. 412. Downing-street, 30th December, 1881.

SIR,—I HAVE the honour to acknowledge the receipt of your despatch No. 94 of the 12th of November, on certain points connected with the Colombo Waterworks.

This despatch was referred to Mr. Bateman, and I enclose for your information a copy of his report.

The question of the size of the reservoir at Labugama has been fully considered, and you will probably concur with me in the opinion that it cannot now be re-opened.

I have, &c.,
KIMBERLEY.

Enclosure in No. 4.

Mr. BATEMAN to the CROWN AGENTS.

16, Great George-street, Westminster,
14th December, 1881.

GENTLEMEN,—IN reference to your letter of yesterday's date, accompanied by a copy of a despatch from the Governor of Ceylon, I have no further explanation to give of the extra cost of the road than that contained in my letter to you of the 27th August last.

My estimate was based upon what Mr. Burnett was told of the cost of similar roads in the Island. I was informed that the cost of such a road as would be required was from £600 to £800 per mile. I took the higher figure, and called it for 10 miles, £8,000; and in order to be quite safe I seem to have estimated its cost in January, 1880, at £10,000.

The Governor states that in his instructions to the Director of Public Works he sent him a copy of my letter, and added an order that the cost should be kept as low as was consistent with the proper construction of the road.

It is quite possible that what the Director of Public Works would consider as the "proper construction of a road" would be very different to such a road as would serve the purpose for the works to be executed.

I can have little doubt that the work has been as cheaply constructed as possible, keeping in view the proper construction of the road, but when the estimate is based on information received in the Island, and not on any calculations of my own, I surely cannot be blamed if the information received has been inaccurate.

With reference to the size of the reservoir at Labugama, I am quite aware that it is somewhat large for the acreage which lies above it and for the rain which falls thereon, and that it could be reduced in size with safety; but very little saving in money would be the result, and there are so many advantages in having a reservoir of very large capacity that I should be very sorry to see it reduced. Taking all circumstances into consideration, I would certainly recommend its being made of the size at which it has been laid out.

Yours, &c.,

J. FRED. BATEMAN.

II.—1882.

PAPERS

RELATING TO

IRRIGATION UNDER TISSAMAHÁRÁMA TANK;

INCLUDING A

REPORT BY J. H. DAWSON, ESQ.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

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IRRIGATION UNDER TISSAMAHARAMA.

No. 1.

From the DIRECTOR OF PUBLIC WORKS to the Hon. the COLONIAL SECRETARY.

No. 1,835. Colombo, 13th October, 1881.

SIR,—I HAVE the honour to forward the annexed copy of correspondence from the Provincial Assistant, Southern Province, together with copy of report, estimates, and tracings of the plans therein referred to, and to state that I have not yet been able to visit that Province with a view of expressing my opinion on the projected schemes.

I am, &c.,
A. MURRAY,
for Director of Public Works.

Enclosure No. 1 in No. 1.

From the PROVINCIAL ASSISTANT, Southern Province, to the DIRECTOR OF PUBLIC WORKS.

No. 811. Galle, 4th August, 1881.

SIR,—I HAVE the honour to forward report and plan, prepared by Mr. Dawson, of the Tissamahárámа irrigation scheme.

2. This report has already been forwarded unofficially to you, and has been seen by His Excellency the Lieutenant-Governor and the Hon. the Colonial Secretary, and the subject of extension of irrigation under this tank discussed upon the spot, the decision there arrived at being that the works to be carried out should be, viz.:—

The extension and repair of present anicut where exposed to floods; estimated roughly to cost	Rs. 4,000
The widening of the inlet sluices and the increase of the width of channel to 12 feet, with a steeper inclination of the bed of channel; estimated to cost roughly	35,000
Two new sluices to be provided in bund of Tissamahárámа tank, being a high and a low-level sluice; estimated roughly to cost	10,500
	Rs. 49,500

It will now be necessary to provide accurate working plans for these works, and I request that I may be authorized to instruct Mr. Dawson to prepare the same, and that such sum as may be required from the surveying vote to prepare them may be granted.

I have also to annex letter from Mr. Dawson explanatory of the length of time which the present report and plan have taken to prepare.

I am, &c.,
J. A. ARNELL,
Provincial Assistant.

Sub-Enclosure No. 1.

From the IRRIGATION OFFICER, Tissamahárámа, to the PROVINCIAL ASSISTANT, Galle.

No. 193. 27th July, 1881.

SIR,—I HAVE the honour to forward my report and plans on the Tissamahárámа Irrigation scheme. The investigation, commencing in January, was carried on simultaneously with the construction of a portion of the scheme of distribution under the tank. Hence the apparent delay in the rendering of these documents, which however will attest the amount of work done in field and office.

The channel works, though not extensive, have the more on that account required constant supervision to ensure their execution in a manner complying with the design of the scheme.

I am, &c.,
J. H. DAWSON,
Irrigation Officer.

Sub-Enclosure No. 2.

REPORT UPON IRRIGATION UNDER THE TISSAMAHA'RA'MA TANK.

INTRODUCTION, AND DESCRIPTIVE OF THE PHYSICAL CONFORMATION OF THE VALLEY OF TIHAWA.

The Valley of Tihawa.—AMONG the most notable features along the course of the Mágama river, or Kirindi-oya, as it approaches the seaboard, running parallel but totally unconnected with it, is the comparatively small but interesting valley of Tihawa, so termed for convenience of description. Abounding in relics of ancient art and industrial labour, it affords to the archæologist, the antiquary, and not less so to the engineer, material for a study of a deeply attractive nature. From its source, among the spurs and ravines of the Binkemehelakanda and the precipitous slopes of the Berelehelekanda, bounding it on the east and west respectively, to the seashore, which it enters at the rock-bound and picturesque coast of Durawa, it is, in a direct length, about 12 miles. Between this valley and the Mágama river, defining their drainage basins, is a watershed or dividing ridge, readily recognized along its upper portion, stretching from the base of the Berelehelekanda to the point of the crossing of the Tihawa and Werawila minor road. Below this, to the village of Mágama, it loses much of its prominence of profile and assumes more of the form of an undulating plain on a level nearly with the bank of the river. Along the eastern edge of this plain, however, the ridge line is distinguishable, though somewhat faintly, the ground to the eastward of it sloping rapidly away to the drainage line of the Tihawa valley. Destined as it is to perform an important function in the scheme of distribution to be submitted, this ridge line is thus early noticed, and should not be lost sight of.

2. The general aspect of the country is not enlivening. The low stunted jungle with which it is covered imparts to it a tone of barrenness and monotony—a characteristic not unfamiliar to those acquainted with the Mágam-pattu—and due to the prolonged droughts with which this part of the Island is annually afflicted. With the slight exception of a belt skirting the river on either bank, there is a total absence of forest, and, consequently, of timber of any value. But the soil, under the beneficent action of water, is proved to be of exceeding fertility, and, untouched for centuries by the plough, might be considered almost virgin. It is of a description very suitable for the culture of paddy, being composed chiefly of clay with a small admixture of sand. Under the present defective and primitive methods of native tillage it is said to yield a crop of twenty-fold. A higher rate of productiveness would doubtless obtain by the use of manure and the adoption of more scientific appliances. Already beneath the tank a tract of about 500 acres is partially cleared and assiduously cultivated, greeting the eye with a verdure of varied hue in pleasing contrast to the dark and sombre foliage around it, and it is not beyond the bounds of probability that with more extended clearances of the malaria-infected jungle, and the dispersion of other sources of disease, together with a plentiful supply of pure and health-bestowing water, the land may yet be connected with a prosperous and fortunate future.

3. *Ancient Scheme for the irrigation of the valley.*—On the river about 10 miles from its mouth are the ruins of the ancient Sinhalese anicut and channel, which diverted its water and conveyed it into the Tihawa valley. The course of this channel, as delineated on the general plan, is sketched from one of Mr. Harrison's plans. That it ever entered the Namadagaswewa, however, is questionable. It would be more in conformity with the "lie" of the country that it should have entered the Tihawa valley a little below the bund of that tank, the latter deriving its water supply from the rainfall among the hills surrounding the source of the valley. Irrigation was originally conducted by a succession of three principal tanks thrown across the basin, each feeding the one next below it. The first of these, to use their modern nomenclature, usually derived from some natural feature with which they are individually and in a special manner associated, is the Namadagaswewa, lying at the head of the valley immediately beneath the Binkemahelakanda and the Berelehelekanda. The bund of this tank is of considerable magnitude, but the extent of land irrigated under it, descending to the head of the Tissamahárama tank, could not have been large. Next followed Tissamahárama itself, originally of a more extensive character than is now the case.

4. About a mile below the present Sittráwila tank is a bund known to the old residents of Mágama as the "Yódayákandiya." This is the third of the series. The water upheld by this bund must have submerged a spacious area of land. The bund is 4,000 feet in length and 16 feet high, reckoned from the lowest point of depression in the valley. It is breached at several points, but the chief breach to which its destruction may be attributed is one of 90 feet in width, and the indications of the wash of the waters from it, conveying with them a deposit of sand and silt, are still observable down the course of the valley nearly to Durawa. At the eastern end of the bund, where it abuts on a rocky spur projecting from the elevated plateau which forms the eastern boundary of the Tihawa valley, are still in existence the ruins of the sluice, built in the usual massive style in vogue among the ancient Sinhalese. The sill is not easily attainable, being covered by fallen stones and general débris; but the width of the vent is about 3 feet and the level of the under-surface of the covering stone, corresponding to the intrados of an arch, is 12 feet below the highest existing point of the bund. Assuming the dimensions of the vent to be 3 feet by 4 feet, the value of the sill referred to the new datum fixed for the scheme—200 feet below the crest of the anicut at Ellagala—would be 132 feet; that of the present outlet sluice at Tissamahárama being 150·33 feet. Premising the level of the original spill or waste-water channel to have been at least 11 feet above the site of the sluice, the surface of the waterspread of the tank, extending up the subsidiary valley to the north-east—portions of which are now occasionally cultivated by the Sittráwila villagers—and inclusive also of the land that now forms the bed of the Sittráwila tank, would have been about 1,000 acres. To the latter (Sittráwila tank) cannot be

ascribed any share in the original scheme of irrigation. Possessing a bund of slender proportions and circuitous formation—characteristics, when contrasted with ancient works, evidencing modern native construction—its position is incompatible with the existence immediately below it of the Yódayákandiya. A channel of tolerable capacity leads from the sluice of the latter, and was the means of irrigating the extensive tract of country southward to Kirinda.

5. Traces have been discovered of a large channel which led the water from the Tissa tank along the eastern slope of the watershed, skirting the Yódayáwęwa, to which it formed one of the principal sources of water supply, and continued its course southward, with off-shoots performing severally the functions of irrigating and feeding channels to minor tanks, and eventually stored it in Galwalawęwa, whence it was distributed to the broad and fertile tracts of Mágama and Durawa Galwalawęwa, doubtless an appellation derived from the fact of the scattered existence, at the site of the breach, of the stones which once formed the revetment to the bund, is situate about half a mile above Mágama village and the Durawa plains, and a little below the ridge line eastward. The destruction of these channels and lesser tanks is attributed to floods in the Mágama river, which, sweeping over the more depressed intervals of the watershed, overtopped the bunds and banks of the channels and caused their demolition. In two instances the sluice, or what is more likely one of the sluices, which distributed the water for irrigation from each of these tanks or channels, as the case may be, are still in existence. They consist of flat rectangular stones standing up two or three feet from the ground—3 feet 6 inches in width and 8 inches in thickness—and are each pierced with an orifice 8 or 9 inches in diameter, with a groove on an enlarged radius on the inner side into which fitted the sluice shutter.

6. To Tissamahárámа, therefore, was obviously assigned the task of irrigating the upper lands on the slopes of the watershed, while the Yódayáwęwa commanded the lower-lying and eastern portions of the valley; and, lastly, the Namaḍagaswęwa might be said to have chiefly performed, from its elevated position, the duties of supplementary store reservoir. These, aided by the channels mentioned, appear to have constituted the main features of the ancient scheme of irrigation for the Tihawa valley. It is doubtful whether the land from Tissamahárámа eastward to the Yódayáwęwa was under the Siṇhalese regimé cultivated to any great extent. This portion of the valley, so well adapted for the storage of water, was, I am inclined to think, reserved almost exclusively for that purpose, irrigation on an extensive scale commencing below the Yódayákandiya: the land thence to Durawa, possessed of a soil of a rich quality, being admirably suited for the formation of paddy fields and readily accessible to water.

7. It is my impression that another large channel was taken off from the Yódayáwęwa to the east at a comparatively high level, which, crossing the watershed and entering the adjacent valley, filled a large tank, now known as "Nimalawęwa," which irrigated the country to the south and eastward to Palutupána. While pursuing my investigations in this direction, ruins of small bunds and of channel-like formations were observed, as indeed might be said to be the case throughout the valley: among others, a rectangular reservoir bounded on each of its four sides by a bund about 200 feet in length. The natives bestow on it the name of "Węlipokuna," signifying a reservoir. Situated to the best of my judgment, on the watershed between the valleys, it was probably filled by the channel above-mentioned. Another singular feature in connection with the Nimalawęwa is a broad flat embankment of substantial appearance about 70 feet in width stretching north and south about a mile in length at right-angles to the bund. Its use is not quite apparent, unless it is a continuation of the bank of the channel from the Yódayáwęwa, and which, being once of huge dimensions, may be supposed to have subsided in course of time to its present, condition. The natives, however, conjecture it to have been a carriage drive of the ancient Rajahs.

8. A search more minute, and conducted in a manner more detailed than could be devoted to the purpose as being beyond my duty, would doubtless not fail to adduce further evidence confirmatory of the supposition that these lands were at no very remote period, as ascertained from inscriptions found in the neighbourhood, the scenes of an extensive agricultural industry. The short, stunted jungle with which they are clothed, the absence of forest on a soil so likely to favour its production and further its maturity circumstances pointing to a former denudation of the country of its primeval growth; the large quantities of bricks, earthen vessels, and broken pottery found in lavish profusion in various localities along the course of the valley, indicating the sites of extensive manufactories of these wares and of human habitations and dwellings; the numerous tanks and traces of channels discovered, and those doubtless likely to reward a stricter search—are facts tending to support this inference; while the contemplation of the ruins of dágabas, temples, and disinterred foundations of other public buildings could scarcely lead to any other conclusion.

9. It has been conjectured that the mere existence of these and similar ruins of ancient irrigation works throughout the Island does not necessarily afford proof of their utilization as such by the originators—that, in fact, they were attempted experiments, and as the failure, from a variety of causes, of their applicability to the purposes for which they were intended, became apparent, their abandonment ensued. Some probability of truth might attach to this theory had these works been "few and far between," but their very number and magnitude, and the care and scientific ability evidently bestowed on their construction, would point to a conclusion at variance with this inference. Without venturing to enter into the question in its archæological aspect, or to introduce a discussion that may be deemed more or less of a speculative nature, and which, further, would be foreign to the subject-matter of this report, it might appear worthy of remark that it would seem more reasonable and in consonance with historic precedent to attribute the decay of these massive and extensive undertakings, not to their abandonment as a consequence of proved incompetence in the attainment of their purpose, but to the decay of the Siṇhalese themselves as a national power; and as the ruins of primitive cities of Holy Writ and of those of pre-historic times,

of late exhumed, point to the habitations of once powerful and populous nations, so, it may be inferred, were the scenes of these works the busy haunts of a thriving and industrious people. Apart, however, from their value as estimated by the archæologist or antiquary, few subjects can be more replete with interest to the professional mind than those involving the revivification of these relics of antiquity, so generally found to be projected on scientific principles, and, if rude in the method of their construction, admirably adapted for the achievement of the objects for which they were designed.

10. *Rainfall.*—Statistics of rainfall observed at Ellagala and Tissamahárâma are available for eight years ended 1880. The yearly totals given are :—

		Inches.
1873	...	35·27
1874	...	39·71
1875	...	49·72
1876	...	23·82
1877	...	69·56
1878	...	73·94
1879	...	34·25
1880	...	42·55
		368 82

Yearly average—46·10 inches.

The returns during 1873, 1874, 1875, and for nine months in 1876 were rendered by Mr. Cotterill and by myself. From October, 1876, on the completion of the supply scheme from Ellagala, the observations have been taken by the several guardians who have from time to time been appointed in charge of the working of the scheme. Since May, 1874, the rainfall has been recorded at Ellagala, that at Tissamahárâma having been observed prior to that date. I am not quite sure that the returns since October, 1876, are wholly reliable for accuracy of record. The guardian's time is divided between Ellagala and Tissamahárâma, and it is not quite apparent how registration was effected at the former station when his work for the time being required his presence at the latter. Taking, however, for purposes of computation, the annual average as found above, and assuming the area of its fall as being over a quarter the extent of the catchment basin draining into the Tissamahárâma tank—the catchment basin being estimated to be five square miles—the total quantity of annual rainfall would amount to 133½ millions of cubic feet, approximately. This volume should fill the tank 2½ times in the year, computing the contents of the latter when full to spill-level at 55 millions of cubic feet—a result which, to my knowledge, has not been verified by experience. A moiety of this rainfall is due to showers passing over a very limited surface of the basin, and the water is instantly absorbed by the soil, which for nine months in the year is in a most parched and thirsty condition. During the remaining three monsoon months, the rainfall is more constant, but even of this the greater portion sinks into the earth and is only sufficient to fill the ponds and pools with which, fortunately, the district is thickly interspersed, and which furnish a temporary supply of drinking water to roaming herds of the wild denizens of the forest. Tradition, among the older residents of the place, ascribes the destruction of the Tissamahárâma tank, and as a necessary consequence of the Yódayákandiya, to floods in the Mágama river. But though the plane of the river occupies a somewhat higher level than that of the Tihawa valley, this theory would appear scarcely compatible with the existence of the elevated watershed between the tank and the river. But it is quite possible that the old inlet channel might have been the means of conveying into the tank the waters of an exceptionally heavy flood in the river; and that floods can be on occasion in tropical countries excessive beyond expectation, is known to be but too probable. Be this as it may, it is a fact beyond dispute that the valley is subject to floodings, though of rare occurrence, the result of a heavy rainfall among the hills surrounding its source ; and until an attempt has been made to ascertain the fall among these mountains, it would be idle to speculate as to its utilization or as to the effect on the works of its sudden and unforeseen descent. The spacious spill, 70 feet in width attached to the tank, would, however, appear capable of passing any reasonable flood that the tank is likely to be visited by.

11. The datum for the levels in connexion with the scheme has been fixed at 200 feet below the crest of the anicut at Ellagala ; and to ensure uniformity, it would be desirable to adhere to it in all future operations connected with these irrigation works. Assuming, therefore, the crest of the anicut as 200 feet above datum, the sill of the head, or inlet sluice, would be 197 feet, and the bed of the supply channel, where it runs out of cutting into the Tihawa valley below the bund of the Namadagaswewa, 193 feet. The levels of other prominent points along the valley are :—sill of outlet sluice of Tissamahárâma tank, 3½ miles from the Namadagaswewa, 150·33 feet; level of general surface of ground at the Yódayákandiya, 2½ miles from the Tissamahárâma sluice, 132 feet; and at the head of the Durawalewaya, 3½ miles from the last-mentioned point, 102 feet. These figures show the general declivity of the valley measured from point to point in straight lines. If, however, the sinuous course of the drainage line be followed, the inclination per mile would be found to be about 11·5 feet in the upper portion, and an average of 7 feet between Tissamahárâma tank and Durawa. The general slope of the line of watershed from the inlet channel, where it curves round the base of the Berelehelekanda to Mágama, is about 12 feet per mile. This high average is due to the steepness of the upper portion of the ridge, but it is to its lower or southern half, as being more intimately connected with the object of the present investigation, that attention must

chiefly be directed, and here its declivity is not more than about 7 feet per mile. The natural gradient to the bed of the river must be also fixed at about 7 feet per mile. The figures are:—

		Feet.
Bed of river at the Ellagala anicut	... ...	184
Do. at the crossing of the Werawila road	...	153
Do. at the crossing of the Andalla road	...	137
Do. at the crossing of Kirinda and Hambantota road	...	102

the intervening distance being $4\frac{1}{2}$, $2\frac{1}{4}$, and $5\frac{1}{2}$ miles successively. Intermediate levels are shown on the general plan, but the above suffice to determine approximately the fall per mile of the river.

12. The anicut recently constructed across the Mágama river at Ellagala commands the Tihawa valley and furnishes that supply of water which, for purposes of irrigation, is distributed from the Tissamahárama tank. The bund forming this reservoir lies about five miles down the valley from its source, resting its eastern flank on a spur from the elevated ground, determining the valley in that direction, and its western arm on the watershed before-mentioned. The land commanded by it that can readily be brought into cultivation is six miles in length from north to south, averaging about three miles in width east and west, giving an area of 11,000 acres inclusive of the land formerly submerged by the Yódaya tank.

13. *Object of Investigation and Report.*—To project a scheme at once comprehensive and efficient, by which this tract can again be brought under the fertilizing influences of the waters of the Mágama river, is the object of the investigation undertaken; and to describe this method with the aid of the accompanying plans is the province of this report, for the better comprehension of which it may be stated in explanation that it embraces—

1st.—An enquiry into the capabilities for irrigation of the entire scheme as at present constituted;

2nd.—As to the extensions and additions required to existing works to render them equal to the cultivation of about 5,000 acres;

3rd.—The ultimate requirements, if ever they become necessary, by which a more extended scheme, commensurate with the vast extent of land available for culture, could be brought into operation.

Finally, the development of a system of distribution under the tank capable of irrigating the lands already sold (about 2,500 acres) and susceptive of future extension.

Supply Scheme from Ellagala.

14. *Anicut.*—The anicut across the Mágama river at Ellagala, completed in 1876, constitutes an important feature in the scheme for the irrigation of the Tihawa valley. The south bank of the river is protected by a substantial abutment and wing walls, while the northern flank is secured by the huge rock which bestows a name to the locality. It is scarcely necessary that a description of this work should be given in this report, but it would be well to note that the floods have of late scoured round the northern slope of the rock, and it will become necessary to protect this bank by a strong curtain wall. I would also recommend the cutting down of the rock at this point to the level of the crest of the anicut. These improvements, adding a length of about 50 feet to the crest, giving a larger area of waterway over it, and protecting the left bank, would render the work nearly perfect.

15. *The Supply Channel.*—The Tissamahárama tank is supplied by a channel from the Mágama river, which, starting from a point above the anicut at Ellagala and cutting through a high ridge, conducts the water into the Tamana-áṛu, a tributary of that river, and the outflow from a tank of the same name. The bund forming this tank, now in a state of dilapidation, is of considerable dimensions, and once collected the rainfall from the western slopes of the Berelehelle-kanda and adjacent hills. A weir across the Tamana-áṛu, at a point lower down its course, upholds the water thus brought into it, and a channel thence, sweeping round the base of the Berelehelle-kanda and cutting through the watershed between the two valleys, conveys it into the Nama-degaswewa, whence collecting the generally scanty drainage of the upper portion of the valley, it flows through a breach in the bund of the wewa, along the natural depression of the basin into the Tihawa tank.

16. *Discharge of Channel.*—The channel with the dimensions shown on the cross-sections, and assuming an effective fall per mile of one foot, slopes of 1 to 1, discharges theoretically 30·8 cubic feet of water per second (Bazin's formula for discharges in channels in earth, giving co-efficient of discharge 60·6), equivalent to 2,661,120 cubic feet per day of 24 hours. Premising a constant depth of half an inch, as the requirement for full irrigation, this volume would suffice to bring 1,500 acres into cultivation. This estimate would give each acre 1,815 cubic feet of water per day of 24 hours, and approximates the quantity estimated for in all their works by the engineers of the Madras Irrigation and Canal Company. The allowance made was three cubic yards per hour per acre, equivalent to 1,944 cubic feet; all their calculations for water-supply being reduced to cubic yards.

17. The water in the channel has been assumed, for the purpose of the above computation, at a normal depth of three feet, that being the difference of level between the crest of the anicut and the bed of the channel at the off-take or head-sluice. Any greater or less depth could be due only to abnormal conditions of the river, which are hardly admissible in calculations of this nature. The floods in the river might indeed be utilized were the storage capacity of the tank greater than is actually the case. But this circumstance will receive attention in due course.

18. The theoretical discharge through the channel has been computed at its lowest capacity, for the reason that, whatever the volume of water discharged by it, it is considerably diminished ere it becomes available for use at Tihawa. This circumstance is attributable to a variety of causes, some of which are :—

19. *Causes tending to depreciate the supplying power of the scheme.*—(1st) The reduced discharging capacity of the channel itself after its prolonged use, owing to inevitable landslips in the slopes and consequent silting of the bed and obstruction in its course. As an example, it may be stated, that on taking charge of the works in January last I caused a large amount of silt to be removed, but on the occurrence of a shower of 2·30 inches on the 11th of May the channel again relapsed into a state of partial incapability—this, of course, explained by the fact that for a great portion of its length it runs through a line of country necessitating a cutting of from 12 to 18 feet in depth, and the soil, but too readily loosened by a smart shower, is deposited in the bed. Elephants and wild buffaloes also contribute in no small degree towards this collection of silt. As a remedy, I would suggest an increment to the velocity of discharge by the adoption of a steeper gradient, say 4 feet per mile; this would enable the channel to clear itself of much of the silt and débris that accumulate in it. Another reason for the depreciation of the velocity is the angularity of the curves on the lower portion of the channel, resulting in the amassing of silt at these corners. This requires to be remedied.

20. (2nd) When the water reaches the Tihawa valley at Namadagaswęwa it overspreads a large tract of country, and in its tortuous and serpentine course to the tank fills numberless water pools and huge cracks or crevices into which the black clayey soil of the valley breaks up during the heat of the dry season. A large absorption of water is due to this cause. Notwithstanding the rapidity of the fall of the ground from the Namadagaswęwa to the Tihawa tank, its continuity is broken by natural obstructions, and the flow of the water further greatly impeded by accumulations of weeds and jungle débris which, washed by the current against the stems of the undergrowth—itself frequently impenetrable—form barriers of a solidity sufficient to restrain its free motion. The due discharge of the channel is thus rendered abortive. These facts, together with the state the channel itself has unfortunately lapsed into, are accountable for the prevalence of an erroneous impression that the scheme itself, in regard to its supplying power, has fallen short of the expectation entertained of it. The formation of a guide channel, therefore, from the Namadagaswęwa to the head of the Tissamahárâma tank is recommended as encouraging a quicker flow of the water through the valley and its more rapid reception by the tank. The causes which would appear to necessitate such a channel are but too apparent, and the advantage of confining the stream in a course artificially defined is obvious. It would also place this neglected portion of the supply scheme within the pale of duties of the conservancy staff, which do not appear to extend to it at present.

21. (3rd) Loss by evaporation.—The loss from evaporation is very appreciable during nine months of the year. It is not known whether observations to ascertain this have been hitherto taken, but it cannot be less than one-third of an inch or 508,200 cubic feet per day, equivalent to 9 per cent. of the total cubic contents of the tank. A simple method of recording the loss due to this cause would be by a daily observation of the depression of water in a flat rectangular tin basin about three inches deep, to be re-filled whenever required.

22. *Nett irrigating capacity of the channel.*—The actual quantity of water therefore thus conducted from the river and delivered for use at Tissamahárâma, subject as it is to the retarding and depreciatory influences above mentioned, and to the existing defective arrangements for its apportionment to the various localities under cultivation, will be sufficient to irrigate not more probably than the acreage above mentioned. The estimated provision of 1,815 cubic feet of water per acre per diem must however be considered liberal, the quantity delivered being 181,500 cubic feet per acre for a crop of 100 days, and it can scarcely be doubted that under a well-organized system of conservancy the cultivation of a greater acreage might be confidently expected.

23. To irrigate 5,000 acres the channel would require to be 12 feet wide at bed, double its present width, with a fall per mile of 3 feet, and the area of the sluices proportionately enlarged. The discharge would then be (Bazin's co-efficient being 63·8) 8,722,944 cubic feet per day of 24 hours, which, at 1,815 cubic feet per acre, would be sufficient for 4,806 acres. It is from the channel, as being the chief agent of water supply, that success is to be expected for the scheme as a work of irrigation. The remark, therefore, that it is of the utmost importance that its efficiency should be rendered beyond doubt, would seem almost superfluous.

TISSÁWEWA.

24. The tank in its present state performs but a secondary function as compared with the channel in the scheme of irrigation for the Tihawa valley. The area of its water-spread, when full to spill level, is 420 acres, its depth from spill to sill of sluice 10½ feet; but the general bed of the tank is comparatively shallow, and the assumption of a mean of three feet, as the average depth throughout its entire area, may be considered a generous estimate. The contents thus computed would be 54,885,600 of cubic feet of water, which, at the rate allowed for irrigation by the Ellagala channel, would suffice for the cultivation of 324 acres for a crop of 100 days' duration. This is for one filling. If allowance be made for loss by evaporation for this period, not more than about half that acreage could be irrigated. Under the same conditions, were it required to irrigate 1,500 acres, the daily demand made upon it would amount to 2,722,500 cubic feet, which could be met for 21 days only with an economized distribution. It is a fact that must be borne in mind, however, that no mean per-centage of the estimated contents of the tank is occupied by the fallen trunks of numberless trees and the extravagant growth of prolific weeds and water lilies, tending in a

considerable degree to impair its irrigating power. Considered, therefore, as a supplementary or reserve agent to be brought into requisition during a possible temporary failure of water in the river, it can scarcely be pronounced equal to the emergencies attendant on a large scheme of irrigation.

25. It would not be irrelevant here to observe, as bearing on this question, that it is to be regretted that, when the repairs to the bund were undertaken, its top level was not retained at a higher elevation than it now is. That this might have been achieved with but little additional expenditure at the time, may safely be asserted, for it is a frequently-related fact that the higher parts of the structure were cut down to fill the gaps in it. Evidences are not wanting to show that the tank originally was possessed of a very much larger capacity, and as such it would more effectually fulfil its mission as a supplementary store reservoir in seasons of drought. Had such been the case, advantage could be taken of the occurrence of floods in the river, which, causing an accelerated discharge through the channel, would thus more rapidly store a supply of water in some measure commensurate with the extent of land likely to require it.

26. Already the question of water supply is a subject of frequent disputation between the landed proprietors of Mágama and those of Tihawa, and at present only about 500 acres are under cultivation at the latter place. The former assert a priority of claim to the water during the dry season, and it may be doubted whether at such times the river brings down a supply adequate to the irrigation of a crop of any magnitude. The intervals of drought, occurring generally in August or September, are happily not of a very prolonged duration, but it would be well to be prepared to cope with a contingency of this nature at a time it may be of critical moment to the welfare of a large and valuable crop. It would be well not wholly to ignore the lessons to be derived from the works of the ancient Siṅhalese, who, by the prudent provision of numerous store tanks, were better prepared to meet such exigencies. Doubtless, they looked to the river as their fountain of supply, but on a failure of that source their tanks were ready for the demands made upon them.

27. The importance of a large store reservoir at Tihawa cannot therefore be over-rated, the more so in view of the increasing demand for land under the tank. The existing low-level 24-inch outlet sluice, with a velocity due to a head of 9 feet, is capable of maintaining 1,373·7 acres in simultaneous cultivation, provided that that head is constantly assured. Two sluices of similar capacity would irrigate double that acreage, approximating the area of land now in private hands. The discharge due to a velocity generated by a head of 14 feet through three 24-inch sluices would irrigate 5,138 acres, thus necessitating the raising of the water-level in the tank five feet above the present spill, and the bund itself six feet above the top of the outlet sluice, the present difference of level between the latter and the existing spill being only four feet. The cost of heightening the bund would be comparatively small, the slopes being flatter than necessary to its present height. The capacity of the tank would be increased by about 98,000,000 of cubic feet, and thus proportionately would the acreage that could be benefited in seasons of emergency be augmented.

28. Allusion has been made to the manner now in vogue of passing water from the tank for irrigation. That a large proportion of water, collected as it is at a great cost, is being daily wasted, it would be idle to dispute. To economize it to the utmost, a system of gauging should be established under effective surveillance. Such a system would also prove of great utility in affording practical data from actual experience for computing the requirements of future irrigation works as to questions of water-supply, &c. The information at present available on these subjects is derived chiefly from treatises by Indian Engineers, but whether the data obtained from statistics of Indian irrigation would be applicable to the diversified requirements of that in Ceylon, has yet to be proved. The quantity of water required for full irrigation would vary under different climatic conditions and for different variety of soils. It is obvious that a country possessed of a plenteous rainfall, a high state of atmospheric moisture, and a clay soil, would require less artificially stored water than one lacking these advantages. Any information, therefore, deduced from actual observation in regard to the proportion of water consumed by paddy cultivation in the several districts of Ceylon where irrigation works are in operation, would be most useful as well as interesting. Some records are doubtless extant bearing on these questions, but they have apparently not yet been formulated for the use of the Officers of the Department, perhaps for the reason that they are not yet sufficiently perfected to justify their publication.

YÓDAYÁWEWA.

29. The preceding paragraphs deal with the subjects placed under the first two heads of the report, viz., the capabilities, for irrigation, of the existing works, and the extensions to them necessary, contingent on a demand for water for the cultivation of 5,000 acres. The third, referring to the irrigation of the entire land embraced by the scheme (11,000 acres), would seem to require but few remarks at present. The extensions to works involved by it would be the widening to 25 feet of the supply channel from Ellagala, with a proportionate addition of waterway to the sluices on it, to deliver 18,180,000 cubic feet per day, and the restoration of another of the ancient Siṅhalese tanks. In intimate connexion with the question of the irrigation of so extensive an area of land is that of a sufficiency of water supply for the purpose, and this, viewing the occasional scarcity in the river, resolves itself in the present instance into a question of sufficiency of storage space. The subject has already received attention in paragraph 26; little remains therefore to be said beyond that the formation of another reservoir appears to me to be not the least important element necessary for the attainment of the ultimate success of the scheme.

30. *Restoration of the Yódayáwewa.*—In position admirably situated for irrigating the large extent of land below it, the tank, the bund of which is known as the Yódayákandiya, readily suggests itself as being the best adapted to meet the future requirements of extended cultivation.

The area of its waterspread, due to a depth of 11 feet at the outlet sluice, would be about 1,000 acres, and the contents of the tank might be computed at 170,000,000 of cubic feet, sufficient, when once filled and without further assistance from the river, for the cultivation of nearly 1,000 acres for one crop. The reasons which would urge the restoration of this magnificent tank, vieing with those which advocate the raising of the Tissa bund, would not seem to lose much, if any, of their cogency, even though it be an assured fact that the submergence of a portion of the land lately sold under Tissamahárama, as well as of the small tract known as the Sittráwila paddy fields, but rarely cultivated, is a necessary accompaniment of its accomplishment. The owners of the land under Tissamahárama would be no losers by an exchange to an advantageous position immediately below the Yódayákandiya. Nor should the Sittráwila proprietors, in acquiring a like position, be loth to acknowledge that the gain has been theirs in obtaining a perennial flow of water, in place of the present precariousness of supply. Pecuniary compensation will, of course, have to be given for houses and garden land, consisting of about ten acres and of as many homesteads. Beyond this, however, viewing the restoration of the tank as a *sine quâ non* for the bringing of the whole of the land available in the Tihawa valley into cultivation, the expediency of sacrificing 1,000 acres for the welfare of the remaining 10,000 scarcely admits of dispute.

31. The cost of the restoration of the Yódayáwęwa would compare favourably with that of the raising of the bund of the Tissamahárama tank, the one item of earthwork alone consisting of 5,500 cubes as against 16,500. Further than this, the storage space obtained in the former would be nearly double that to be gained by the adoption of the latter project, being about 170 as compared with 98 millions of cubic feet. It might indeed be stated, speaking roughly, that water could be stored in the Yódayá tank at 50 per cent. of its cost if stored in Tissawęwa. The question, therefore, whether the renovation of this ancient tank might not take precedence of the alternate scheme of storage at Tihawa, might well be considered of importance sufficient to form a subject for mature deliberation. The land commanded by the Yódayá tank is shown on the general plan by the dotted blue lines, which are approximate contours at the level of the proposed sill of the outlet sluice, being about half the entire area of that irrigable under the Ellagala anicut; nor would the devising of a scheme of distribution under the tank present a problem difficult of solution, but rather, supplementing that under the Tissamahárama tank, constitute a complete and exhaustive project needful for the perfect irrigation of the Tihawa valley.

Distribution under the Tissamahárama Tank.

32. *Low-level Scheme.*—For the better description of the proposed method of distribution under the tank, the scheme might be divided into the low and high-level, so termed for the reason that the former, starting from the low-level outlet sluice, would command all land on a level with the sill of that sluice or lying below it. The details of design for the latter, for irrigating the more elevated portions of the valley, would vary greatly, contingent on a decision of the question of raising the spill-level of the tank. The proposed low-level scheme is, it is believed, at once comprehensive and simple of design and easy of conception. To describe it in a few words, it consists of a main channel, which, starting from the sill of the present outlet sluice, continues in an almost due southerly course, leaving in its career, to its right and left, at intervals suited to the local requirements of irrigation, distributing sluices which form the starting points of subsidiary channels, till its ultimate goal, the village of Mágama, is reached.

33. On the general plan such portion of the channel as is completed and ready for use is distinguished by blue, and the remainder by red, with a width at bed of six feet, slopes of 1 to 1, assumed depth of water three feet, and a gradient to its bed which, at commencement, is identical with the sill of the outlet sluice, of two feet per mile; it would discharge 44·7 cubic feet per second (co-efficient of discharge, Bazin's, being as before 60·6), or 3,862,080 cubic feet per day of 24 hours, which, at the rate previously allowed for irrigation, would irrigate 2,127 acres, the land already sold under the low-level scheme not exceeding that acreage. The discharge through the sluice, however, due to a velocity generated by the existing head of water, will not be of a volume sufficient to maintain the depth assumed in the above calculation; cultivation will, consequently, bear a proportion to the discharge from the sluice and not to the irrigating capacity of the channel.

34. The upper portion of the channel is in partial cutting and double embankment, the residue in cutting of depths varying from 18 inches to 3 feet, with a single bank on the left or lower side. At 14·75 chains along its course are provided inlet and outlet sluices for the reception into the channel or escape through it, at pleasure, of the water, being the wastage from the high-level scheme, liable to be impounded by its upper or right bank. The channel thence, sweeping round the base of the Tissamahárama dágoba, avoids a deep pool termed "Amunakalawala" by curving round its western and southern edge. At 37·75 chains is a bridge-crossing carrying the Tihawa and Kiriada minor roads. At 41·75 is the first subsidiary channel running eastward on a ridge line for a length of 25 chains, with a sluice at its off-take, and two irrigation sluices to right and left. At 12 chains further down the subsidiary channel is another set of irrigation sluices, one dispensing to the north and the other to the south. From the point of the off-take of the first subsidiary, the bed width of the main channel lessens to 4·5 feet. At 68·50 chains is the second subsidiary again to the eastward, terminating after a length of 25 chains at the spill of the Yódayákandiya. This channel is also taken off the main by a distributing sluice combining an irrigation gate opening to the south-west. The main channel from this point is reduced to 4 feet at bed. Chain 87·50 marks the site of the off-take of the third subsidiary and accompanying sluice with an irrigation gate to the southward. This subsidiary leads towards the west, and defines the range or limit of the low and high-level schemes westward of the main channel. The latter, continuing its southerly course, strikes at 96·50 chains the watershed or dividing ridge mentioned

in the first paragraph of this report. On this watershed it is proposed henceforth to carry the main channel. Its completed length is 112·50 chains. Beyond this point the ridge line declines rapidly, necessitating the construction of two 6-feet masonry falls in close succession, in position approximately indicated on the general plan. Thenceforth it is susceptible of extension, with a gradient of three feet per mile, till the Mágama lands are approached. With the exception of the three sub-channels already described, none of those shown on the plan have been determined on the ground. Some years may elapse ere they may be required to be cut, and as by then all traces of them, had they been marked now, will have been obliterated by the unceasing growth of jungle, all labour at present bestowed on them will have been wasted. It will not be difficult in the future to define their course on the ground from their position on the plan.

35. *High-level Scheme.*—The site in the bund to be selected for the outlet sluice, and the elevation of its sill for the high-level scheme, would depend in a great measure on a definitive decision of the question of raising the water-level of the tank. The course and position of the high-level channel depicted on the general plan is one determined having regard to the present spill level, the sill of the sluice being proposed to be four feet above that of the low-level sluice, or 6·43 feet below spill. Should the decision be in favour of raising the water in the tank, the sill of the high-level sluice could also be raised with advantage. It is thought advisable, therefore, to defer the final consideration of this scheme for a more opportune occasion. In incorporating the existing west high-level channel with this scheme, its course, slightly diverted, should not be allowed to impinge on the outer toe of the bund.

36. With regard to the existing east high-level channel, I would advocate its abolishment should the erection of another low-level outlet sluice be in contemplation, for the reason that the benefit conferred by it is not commensurate with the cost of upkeep entailed, and for the further reason that it would be highly advisable that in future the effluent water from the sluice should be unencumbered by an obstruction similar to that obtaining in the present case. I would recommend the substitution of a subsidiary from the main low-level channel. The strip of land thus lost for the cultivation of paddy would be infinitesimal, and could be utilized for gardens. In the event, however, of the tank being raised, a high-level channel, having its source in a sluice in the neighbourhood of the spill-water, might be deemed worthy of consideration. Its presumed course is sketched on the general plan. The balance available on this scheme, about 570 rupees, though insufficient to perfect the work, might be judiciously utilized in effecting some of these improvements.

Synopsis of Report and Estimate of Cost of Works.

37. The information elicited by the investigation described in the foregoing report may briefly be summed up as follows:—

1st.—The addition of an abutment with wings is required to the anicut for the prevention of scour on the north bank of the river.

2nd.—The supply channel is capable of irrigating 1,500 acres, the improvements recommended being a steeper gradient and the easement of the sharper curves in its course.

3rd.—To render it competent to irrigate about 5,000 acres, the channel will require double its present capacity with a fall per mile of three feet, and the area of the waterway of the sluices proportionately enlarged.

4th.—To be equal to the work of cultivating the entire available acreage in the Tihawa valley, it should be 25 feet in width, with a fall per mile as stated under the last head, the sluices being rendered capable of discharging the required quantity of water.

5th.—The construction of a guide channel from the Namadagaswewa to the head of the Tissa tank.

6th.—The capacity of the latter is adequate to the irrigation of 324 acres for a crop of 100 days' duration, or sufficient for 1,500 acres for 21 days.

7th.—The existing outlet sluice can keep 1,374 acres in simultaneous cultivation, provided always the full depth of the tank is maintained.

8th.—Treble the present sluice area is needed under an effective head of 14 feet for the cultivation of about 5,000 acres under a condition similar to that noted in the last case.

9th.—An increase of storage space is an essential element in the promotion of the ultimate object of the scheme.

10th.—The feasibility of a system of distribution, high and low-level, deriving its source solely from Tissawewa, or more efficiently from the combined agency of the Tissa and Yódayá tanks.

The most pressing necessities of the scheme, in view of the advancement of cultivation under it, would be met by a compliance with the requisitions embodied under heads Nos. 3, 5, and 8, involving the expansion and improvement of the supplying channel, and the augmentation of the distributing power of the tank; in importance second only to the above being the provision of additional storage space.

38. In appending the subjoined estimate, I would venture the preliminary statement that its introduction here does not imply the expression of my opinion favouring immediate execution of all the works embraced in it. As the result of my investigation, it is given merely in fulfilment of the object of the present report, that some conception might be formed of the cost of works it might become necessary to undertake in the future, in compliance with the advancing claims of the scheme; and, as such, it must be viewed as an approximation. The preparation of detailed estimates must be considered as beside the limits assigned to this report. They should be submitted from time to time as may be deemed necessary, suited to the ever varying conditions of local requirements.

39.—*Estimate.*

Anicut.

	Rs.	Rs.
Improvements and additions	— ...	4,000

Supply Channel for (5,000 acres).

Additions to head sluice	2,000	
Do. regulating do.	1,500	
Improvement, expansion, and prolonging of channel ...	27,500	
Incidental expenditure	2,500	
		33,500
Contingencies	...	3,350
	Total ... Rs.	36,850

Tissawewa.

Additions to bund	24,000	
New double low-level sluice	6,500	
New double high-level sluice	4,000	
Additions to spill-water	2,000	
Incidental expenditure	2,000	
		38,500
Contingencies	...	3,850
	Total ... Rs.	42,350

Yódayáwewa.

Additions to bund	8,500	
Double low-level sluice	5,500	
Spill	2,000	
Improvements to spill-channel from Tissa to Yódayáwewa, and construction of sluices	5,000	
Compensation	8,000	
Incidental expenditure	2,500	
		31,500
Contingencies		3 150
	Total ... Rs	34,650

Supply Channel for (10,000 acres)

Improvement and addition to channel	25,000	
Addition to sluices	3,500	
Incidental expenditure	2,500	
		31,000
Contingencies	...	3,100
	Total ... Rs.	34,100

Distribution.

Per mile of main channel, with sluices and cost of tracing... .	3,500
Per mile of subsidiary channel, without sluices, but adding cost of tracing ...	600

FINANCIAL.

40. Considered in its financial aspect, the scheme would appear worthy of the highest encouragement in the development of its latent resources. The waters of the Mágama river, in their ceaseless and ignoble flow to the sea, need but be diverted and utilized, not only to the profit of the projectors of the scheme and the tillers of the soil, but to the ultimate benefit of the Province, if not of the whole Island. For there can scarcely be entertained a doubt, that, under a policy fostering those inherent germs of success underlying the superficial aspect presented by the scheme, and by a bold and liberal administration to its wants, it will eventually vindicate its claim to be considered one among the most promising of the works undertaken by the Government To state an extreme case, premising that the 10,000 acres under the scheme are in full cultivation for one crop in the year, the gross Government revenue would amount to 40,000 rupees per annum on a crop of a twenty-fold yield, a bushel of paddy being valued at one rupee. The revenue would therefore equal more than 13 per cent. on a capital expenditure of 300,000 rupees, presuming that sum will have been the total cost of bringing the abovementioned number of acres under irrigation. Looking, however, to returns that might be expected in the immediate future on capital to be invested, and further, to the difficulties other than professional—but by no means insurmountable—to be encountered in the realization of the more ambitious project, I would limit the estimate of revenue to that to be derived from an annual average of a fifteen-fold crop over an extent of 5,000 acres. This would amount to 15,000 rupees, or 7½ per cent. on an expenditure of 200,000 rupees. I am not in a position to state the actual total expenditure to date, but presume it to be about 150,000 rupees, to which 50,000 rupees are added for urgent and immediate improvements to bring 5,000 acres into cultivation. In the foregoing calculations no account is taken of the accretion to revenue derivable from the collection of a water-tax. Its imposition, however, can scarcely be recommended while the scheme is in its infancy.

DESCRIPTION OF PLANS, AND CONCLUSION.

41. A brief description of the plans submitted in connexion with this report may be necessary, though they are in a great measure explanatory of themselves.

The general plan is one of compass survey and partial sketch of the whole country embraced by the scheme, from the anicut at Ellagala to Mágama and Kirinda. The accuracy of the positions of the general features of the valley and of the sites of the various works—though sufficiently true for all practical purposes, derived as some of them are from tracings from the Surveyor-General's Office—should not be too strictly criticised. A more accurate survey, if such be required, could have been undertaken only on specific directions to that effect, and would of course have involved the bestowal of more time and labour in its execution than that I have been able to devote to the compilation of the present plan, which, if it conveys a tolerably clear and truthful idea of the relative positions of the several component parts of the scheme in regard to each other and to the land to be irrigated, will have sufficiently achieved its object. The figures in red are levels taken during the recent investigation, those in black being reduced to the new datum from tracings from the Surveyor-General's Office. The channels shown in single red lines form the scheme of distribution under the Tissa tank, while those in blue would derive their water supply from the Yódayáwewa The contour of the water-spread of the latter has not been defined, but an approximation is shown on the plan. The land surveyed for sale is coloured green, and is now nearly all disposed of to intending cultivators. Should it be in contemplation to extend the scheme both in regard to the spread of cultivation under it, and as to its requirements viewed from a professional standard, the commencement of a new plan is advisable to embody such further details of information as might be gathered while the works are in process of construction, and from surveys now in progress under the direction of the Survey Department.

Plan No. 2 gives the longitudinal section of the supply channel from Ellagala to Namaḍagaswewa with cross-sections at intervals of 100 yards. The section is continued along the natural depressions of the valley to the sill of the outlet sluice at Tihawa, its total length being 6¼ miles.

On plan No. 3 are first the longitudinal and cross-sections of the Tissa bund, showing the earthwork required for raising the bund six feet; second, the longitudinal section of the main distribution channel as far as it is completed; third, the longitudinal section and cross-sections of the Yódayákandiya, the new earthwork showing in burnt sienna. As all information as to levels, &c., is fully entered on the latter plans, it is unnecessary further to describe them. I have already alluded to the circumstance that it was not intended that final estimates of working details should accompany this report. In like manner it was not in contemplation that it should contain a recital of a minutely descriptive character of each work or undertaking proposed in it. Each such project would require, when the time may arrive for its construction, a short statement to place fully on record its distinctive properties and individual merits. The object of the present report, which might be considered to have already trespassed beyond the limits primarily assigned to it, is to convey a description of the scheme in its entirety, together with a general view of its several constituent parts—a consummation which, however faulty and imperfect in the rendering, it has been my endeavour to attain.

J. H. DAWSON,
Irrigation Officer.

Tissamahárama, 27th July, 1881.

Sub-Enclosure No. 3.

From the PROVINCIAL ASSISTANT, Southern Province, to the DIRECTOR OF PUBLIC WORKS.

No. 881. Galle, 23rd August, 1881.

SIR,—I HAVE the honor to forward two estimates for the additional work to be undertaken at the irrigation works at Ellagala and Tissamahárama tanks, amounting to Rs. 57,095.

The works proposed are:—

		Rs.
1.—Abutment to anicut at Ellagala	...	3,950
2.—Enlargement of head sluice	...	3,760
3.— Do. of regulating sluice	...	2,430
4.— Do. of channel ...	...	27,170
Incidental expenditure ..	...	2,500
Contingencies ...	...	3,981
		43,791
5.—Low-level sluice, Tissamahárama	...	8,525
6.—High-level sluice ...	...	2,820
Incidental expenditure...	...	750
Contingencies ...	..	1,209
Total ...	Rs.	57,095

I would beg to recommend that these sums should be voted as early as possible, or that a portion may be voted so as to enable us to commence work without any delay.

The plans will follow.

I am, &c.,
J. A. ARNEIL,
Provincial Assistant.

ESTIMATE of the EXPENSE necessary to be incurred for the construction of Two Sluices in the Bund of Tissamaháráma Tank, Hambantota District, Southern Province.

Galle, 23rd August, 1881.

Plan or Description.	Particulars.	Rate.	Portion of work to be performed by Contract or otherwise.	TOTAL.
	Low Level Sluice.	Rs. cts.	Rs. cts.	Rs. cts.
This estimate provides for the construction of a double low-level sluice at the east end of the bund, combining a vent for the supplying of the east high-level channel, according to the accompanying design.	250 cubes of excavation	1 50	375 0	
	Safety dam and protective works ..	—	250 0	
	80 cubes of masonry	80 0	6,400 0	
	3 iron sluices and iron piping, complete ...	—	1,500 0	8,525 0
	High Level Sluice.			
It provides also for the construction of a high-level sluice at the west end of the bund, as shown on the plan.	120 cubes of excavation	1 50	180 0	
	Safety dam and protective works ...	—	100 0	
	28 cubes of masonry	80 0	2,240 0	
	1 iron sluice, complete	—	300 0	2,820 0
	Incidental expenditure, comprising erection of lines for workmen, transport service, &c ..	—	—	750 0
				12,095 0
			Casualties ...	1,209 0
			Total .. Rs	13,304 0

	Rs. cts.
Overseers, not exceeding ...	2 0
Artificers, do. ...	2 0
Carts, do. ...	1 50
Coolies, do. ..	0 42

J. A. ARNEIL,
Provincial Assistant.

ESTIMATE of the EXPENSE necessary to be incurred for the enlargement and improvement of the Supply Scheme from Ellagala to Tissamaháráma Tank, Hambantota District, Southern Province.

Galle, 23rd August, 1881.

Plan or Description.	Particulars	Rate.	Portion of work to be performed by Contract or otherwise.	TOTAL.
	Abutment to Anicut.	Rs. cts.	Rs. cts.	Rs. cts
This estimate provides for the construction of an abutment with wings on the north bank of the river at Ellagala, and the enlargement of the head and regulating sluices on the supply channel, doubling the present sluice area, according to the plans herewith accompanying.	Cutting and clearing foundation on rock ...	—	100 0	
	35 cubes masonry	80 0	2,800 0	
	15 cubes dry rubble walling ...	20 0	300 0	
	600 cubes embankment	1 25	750 0	3,950 0
	Enlargement of Head Sluice.			
	200 cubes excavation and widening of channel	1 50	300 0	
	42 cubes masonry	80 0	3,360 0	
	25 sq. ft. shutters with hooks complete	2 0	50 0	
It provides, also, for the enlargement of the supply channel as shown and described on the plans.	Iron railing	—	50 0	3,760 0
	Enlargement of Regulating Sluice.			
	200 cubes excavation and widening of channel	1 50	300 0	
	26 cubes masonry	80 0	2,080 0	
	25 sq. ft. shutters with hooks, complete	2 0	50 0	2,430 0
	Enlargement of Channel.			
	13,585 cubes of excavation, inclusive of rock cutting	2 0	—	27,170 0
	Incidental expenditure, comprising clearing jungle, erection of lines for workmen, transport service, &c.	—	—	2,500 0
				39,810 0
			Casualties ...	3,981 0
			Total — Rs. ..	43,791 0

	Rs. cts.
Overseers not exceeding ..	2 0
Artificers do. ...	2 0
Carts do. ...	1 50
Coolies do. ...	0 42

J. A. ARNEIL,
Provincial Assistant.

No. 2.

The Hon. the COLONIAL SECRETARY to the DIRECTOR OF PUBLIC WORKS.

Colombo, 10th November, 1881.

SIR,—WITH reference to your letter No. 1,835 of 13th ultimo I am directed to request you to convey the Governor's thanks to Mr. Dawson for the very interesting report which it forwarded, on irrigation under the Tissamahárama tank, and also to invite you to offer any remarks upon it which you may think right.

I am also to state that His Excellency will be glad to learn whether the Mágam-oya can be relied upon all the year round for a continuous supply of water to the tank, and, if not, for how long the water fails in the river, and makes it thereby necessary to rely upon the tank as a reservoir. The Governor will be obliged if you will, in forwarding your report, give your attention to this latter point.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

No. 3.

From the DIRECTOR OF PUBLIC WORKS to the Hon. the COLONIAL SECRETARY.

No. 2,153. Colombo, 7th December, 1881.

SIR,—WITH reference to your letter No. 1,736 of the 10th ultimo, upon the subject of Tissamahárama, I have the honour to inform you that the Mágam river can be relied upon for a continuous supply of water from October to January each year, this being the time of the first maha crop of paddy.

2. During February and March, the second maha crop season, the supply of water in the river is uncertain and depending upon the thunderstorms at the end of the N.E. monsoon.

3. With the commencement of the S.W. monsoon in April, and through May and June, the time for the first yala crop season, the supply of water in the river, though less than during the N.E. monsoon, is sufficient for the cultivation of a very extensive crop.

4. In July, August, and September the quantity of water that flows down the river is small, and the river has been known to be dry at times during these months.

5. Therefore, for cultivation in the months of February, March, July, August, and September, a supply of water would have to be stored in reservoirs, but, if the cultivation is restricted to two crops in the year, the first maha, and the first yala, there would be no necessity for large storage reservoirs, as the water could be drawn direct from the river through the Tissamahárama tank to the fields.

6. The Tissamahárama works, as they are at present, will serve to irrigate 1,500 acres of paddy land. They were originally designed on a small scale (with the exception of the anicut across the Mágam river) with the view of ascertaining whether people would go and settle down and purchase and cultivate their lands. If this has proved to be the case, I think it would be desirable that the works should be enlarged for the irrigation of 5,000 acres more land. This could be done at a cost of 52,800 rupees.

7. What is required for the enlargement of the works is a wing wall to the anicut, enlargement of the head sluice from the river into the channel, the widening out of the channel leading the water from the river to the Tissamahárama tank, enlarging the low-level sluice from the tank, and putting in a high-level sluice from the tank for the irrigation of the upper fields near the tank, and some channels for distributing the water over the land to be irrigated.

8. Mr. Dawson, in his report, calculates the return to the Government from one fifteen-fold crop over the extent of this 5,000 acres at 7½ per cent. on the total expenditure on the works (from the first commencement) of 200,000 rupees. This, I think, is a very low estimate of what may be expected.

9. As the land becomes sold and cultivation extends over these 5,000 acres, the works could then be further enlarged and another reservoir formed at a cost of about 100,000 rupees for the irrigation of another 5,000 acres, the return from which would not be less than from the other 5,000 acres.

I am, &c.,
J. F. CHURCHILL,
Acting Director of Public Works.

III.—1882.

COLOMBO HARBOUR WORKS.

DESPATCH

FROM

THE RIGHT HON. THE SECRETARY OF STATE

IN REPLY TO THE

RESOLUTION OF THE LEGISLATIVE COUNCIL,

DATED 10TH NOVEMBER, 1881:

"That in view of the inability of the Colony to afford to spend a larger sum than £800,000 on a complete Harbour scheme such as that proposed by Sir J. Coode, and the fact that ships of Her Majesty's Navy as well as Mail Steamers will be accommodated by it, the Imperial Government be asked to contribute such amount as may be required beyond £800,000, if it be resolved to carry out the Consulting Engineer's final design."

(The Hon. W. W. Mitchell.)

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

COLOMBO HARBOUR WORKS.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon. Downing Street,

No. 11. 11th January, 1882.

SIR,—I HAVE the honour to acknowledge the receipt of your despatch No. 114 of the 26th of November, forwarding a copy of a Resolution proposed by an Unofficial Member of the Legislative Council, asking whether, if the Consulting Engineer's final design for the Colombo Harbour Works should be fully carried out, Her Majesty's Government would contribute such amount as might be required for it in excess of the sum of eight hundred thousand pounds (£800,000).

In reply, I have to inform you that, as you will no doubt have already gathered from my telegram of the 9th of December, Her Majesty's Government would not feel justified in asking Parliament for a contribution towards the cost of the Colombo Harbour Works.

I have, &c.,

KIMBERLEY.

IV.—1882.

ROAD ORDINANCE COMMISSION.

REPORT.

REPORT of the COMMISSIONERS appointed to "enquire and report (1) upon the best method of collecting or exacting Labour under the Ordinance No. 10 of 1861, and (2) upon the unrestrained power of Commutation at present permitted, and the best method of recovering the Commutation Money under the Ordinance."

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

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LETTER FORWARDING COMMISSION.

Colonial Secretary's Office,
Colombo, 21st March, 1881.

GENTLEMEN,—I AM directed to transmit to you the enclosed Commission appointing you Commissioners to enquire and report—

(1) Upon the best method of collecting or exacting labour under the Ordinance No. 10 of 1861; and,

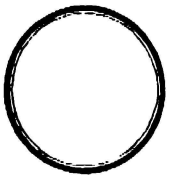
(2) Upon the unrestrained power of commutation at present permitted, and the best method of recovering the commutation money under the Ordinance.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

The Hon. W. D. WRIGHT (Chairman).
The Hon. P. RÁMA-NÁTHAN.
E. ELLIOTT, Esq.
G. W. TEMPLER, Esq.

COMMISSION.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith.



JOHN DOUGLAS.

To the Hon. WILLIAM DUMARESQ WRIGHT, Acting Auditor-General; the Hon. PONAMBELAM RÁMA-NÁTHAN, Member of the Legislative Council; EDWARD ELLIOTT, Esquire; and GEORGE WILLIAM TEMPLER, Esquire.

GREETING.

WHEREAS We deem it expedient to cause enquiry to be made into the working of the Ordinance No. 10 of 1861, entitled "An Ordinance to consolidate and amend the Laws relating to Public Thoroughfares in this Colony," and to obtain a report—

(1) Upon the best method of collecting or exacting labour;

(2) Upon the unrestrained power of commutation now permitted, and the best method of recovering the commutation money under the said Ordinance—

by a Commission of Inquiry to be appointed by Us under the provisions of the Ordinance No. 9 of 1872, entitled "An Ordinance to empower Commissioners appointed by the Governor to inquire into any matter referred to them for inquiry, to hear evidence thereon:"

Now, Know Ye therefore that We, in confidence of your prudence, ability, and fidelity, have appointed you, and by these presents do appoint you, the Hon. William Dumaresq Wright, the Hon. Ponambelam Ráma-Náthan, Edward Elliott, Esquire, and George William Templer,* Esquire, Our Commissioners to carry on the enquiry aforesaid, and to exercise for that purpose the powers given to Commissioners by the said Ordinance, in conformity with the provisions thereof.

GIVEN at Nuwara Eliya, this Nineteenth day of March, One thousand Eight hundred and Eighty-one.

By His Excellency's command,

W. H. RAVENSCROFT,
Acting Colonial Secretary.

* Mr. Templer subsequently left the Commission and Mr. Allanson Bailey took his place.

ROAD ORDINANCE COMMISSION.

REPORT.

We, the Commissioners appointed to enquire and report (1) upon the best method of collecting labour under the Ordinance No. 10 of 1861, and (2) upon the unrestrained power of commutation at present permitted and the best method of recovering the commutation money under the Ordinance, have the honour to report as follows.

We shall deal with the subject under four heads :—

I.—A historical review of the legislation between 1848 and 1861.

II.—A summary of the information we have elicited as to the working of the Ordinance of 1861.

III.—The causes which, in our opinion, have led to the failure of the system referred to us for enquiry and report.

IV.—Suggestions for the more successful calling out of the labour and the collection of the commutation money due under the Ordinance, without undue pressure upon, or demoralization of, those who are affected by it.

PART I.—HISTORICAL REVIEW, 1848-1861.

The system of requiring a contribution in labour for the improvement of the thoroughfares of the Island was first brought into force by the Ordinance No. 8 of 1848, which rendered every male between 18 and 55 years of age residing in the colony liable to six days' *labour*. At the same time, liberty was given under certain conditions to *commute* this liability by a payment of money to be fixed by the Governor, but which was not to exceed 3*s*. per head. Every landowner was once a year, under the provisions of the 26th clause, to furnish a list of houses standing on his property, and each householder was further to furnish one a year, on being required to do so by the division officer, a list of all males resident in his house and liable to labour. Householders were personally liable for their own labour or commutation, and were also held responsible for the due discharge of the liability of every male included in the list furnished to the Division Officer. Householders were consequently empowered to deduct the amount fixed as the commutation rate from the wages of servants on discharge.

From these householders' schedules the division officer was to prepare a general list of all persons liable to labour, and to make such corrections and additions as seemed necessary to him. After the appropriation of the labour by the proper committee, the division officer was required to call on each householder to elect if he would work out his liability to labour, or commute it by a money-payment, in which latter case payment was to be made within ten days. As regards those who remained liable to *work*, the division officer was empowered to call on the householder to cause the inmates of his house to attend in a certain rotation at a named place. (§41.)

A householder failing to pay commutation or to work within the time specified was liable to a fine of Rs. 50 for his personal default; but in case of failure by an inmate, he might, by payment of double the rate of commutation, discharge the liability of such defaulting inmate. A resident was defined (§78) to be one domesticated in any district for twelve months or an owner or lessee of any land for three months, but new-comers were (§31) not liable unless resident in the Island for at least three months at the expiration of the current year.

The provisions of this Ordinance were in some respects considered of too stringent a nature, especially in regard to the responsibility of the householder, for the default of the inmates of his house, and an amending Ordinance (No. 14 of 1848) was passed in the same year. Provision was therein made for calling on each person directly, and not through the householder, to elect if he would work or pay, in which latter case *immediate* payment was required. The notice to work at an appointed place was also to be given direct to each individual. Any person who, having elected to commute, failed to pay the commutation, remained liable to work. Failure to attend and work on being duly noticed, entailed prosecution before the Police Court, which could on conviction award such punishment as it was empowered by law to inflict. (§ 5.)

In 1857 reports were called for on the working of these Ordinances, and suggestions invited for their amendment. These papers dealt chiefly with parts of the Ordinance not connected with the subject of the present enquiry. They however indicate that the work of the Police Courts was clogged by a large number of prosecutions for default in attending to labour. In the few cases that came to trial, nominal penalties were imposed by the Magistrates, while the great majority of them were settled by the payment of double commutation to the division officer, by whom all prosecutions appeared to have been instituted, and who, it was stated, resorted to Court as an easy means of securing payment.

The draft of an amending Ordinance, which was at this time circulated for consideration, contained a proposal to entrust division officers with extensive powers of distraint, but it was abandoned in view of a consensus of opinion that much of the failure which had then attended the operation of the Road Ordinance was attributable to the conduct of the division officers, who, it was felt, should be brought more immediately under control. As fairly representing the view then expressed, we extract the following passage from the report of the Government Agent of the Southern Province:—

What appears to me to have constituted the principal check upon the progress of the existing Ordinance, and which, if not abated, will materially obstruct the working of the projected one, is the total unfitness in the majority of cases of the persons selected to fill the office of division officers. The malversations and extortionate practices of this class of men are notorious, and have done more, in my opinion, to indispose the people towards the Ordinance, and defeat its ends, than any other cause. It is advisedly that I assert that, in localities to which I could point, where the Ordinance had almost ceased to be operative, or was only upheld by the coercion of law, the profits realized by the division officers seemed to rise in an inverse ratio. Indeed it only requires a practical acquaintance with the details of the Ordinance to perceive how its miscarriage may be turned to account by these officers, and converted into a positive source of income. It would be difficult to exaggerate the pernicious consequences of such a system, and did the proposed Ordinance contemplate no other emendation than the repeal of the provisions in the present one under which division officers are entitled, as informers, to receive one-half of the fines imposed upon defaulters by the courts, I should look upon such amendment alone as a sufficient reason for carrying it. At present, should 1,000 out of 1,400 persons liable to perform labour under the Ordinance neglect to perform the same, and be thereupon prosecuted by the division officer and fined 10*s.* each, the amount realized from such prosecutions by the division officer would be equal to £250. It matters not that the persons upon whom such fines are imposed fail to pay the same. The division officer is secured by the Ordinance against any loss arising from such contingency, and can claim from the Government Agent the amount of the share to which he would have been entitled had the fines been paid. It must be evident, that with such inducements before him the division officer has the strongest personal motive by which a native can be actuated to resort to law for the enforcement of the Ordinance, and with that view to neglect the fulfilment of those duties, the observance of which would, in all probablity, have obviated the necessity for such a course. Nor do his gains stop here. Prosecutions are compounded out of court, and are then either withdrawn by the division officer or dismissed on the day of trial on account of his absence. Foreigners who resort to the colony for only a few weeks, and are in no way liable to the Ordinance, are called upon for payment as if they were residents of the division and had elected to commute. Adults who years ago claimed exemption, as being under the age of 18, seem never to grow older; while the annual lists of males between that age and fifty-five, which the division officer is bound to transmit to the Committee, instead of increasing with the population exhibit a yearly numerical decline. As regards the headmen, if their conduct has not been equally detrimental, it is because it has not assumed so oppressive a form. They have been content with silently counteracting the law, but although such opposition may not have been openly displayed, and has been evinced rather by an indisposition to assist in carrying out the provisions of the Ordinance than by any overt resistance, its consequences are not the less manifest. Had the legitimate influence of the headmen been enlisted in their respective jurisdictions on behalf of the Ordinance, the results would have been widely different.

From these preliminary observations it will be gathered that, in my view, much of the failure which has attended the operation of the Road Ordinance in this Province is attributable to the conduct of the division officer, and that, highly as I approve of the general scope of the proposed enactment, it appears to me that unless it be so moulded as to bring those officers more immediately under control, and so altered as to abridge the powers which it seems intended to vest in them (and which in my opinion they are certain to abuse), but little practical improvement will be found to ensue.

Before passing from the review of the legislation on this subject, it may be of interest to record some of the suggestions in the Draft Ordinance and the reports, which were not adopted. In view of the undoubted poverty of certain classes, it was proposed that if "a common cooly or day labourer or inferior domestic servant, peon or messenger, a journeyman artificer or the like, should satisfy the District Road Committee that he was dependent for his support solely on his daily labour," the Committee should reduce the commutation rate in such case to 1*s* 6*d.* a year.

It was also proposed to make the "primary obligation a money-payment, allowing at the discretion of the Chairman, in case of poor persons, a commutation in labour."

The following clause (68) was also rejected:—

If the division officer shall not find property of any such defaulter sufficient to pay the amount due as commutation for any year, with costs as aforesaid, and such amount with costs be not paid, the person so in default shall become, *ipso facto*, liable to perform (in addition to the six days' labour due for any year other than the one in which the default was committed) so many days' labour as shall be equivalent to the amount of his debt and costs, at the ordinary rate of wages for a cooly in the district where he resides; and he shall also forfeit the privilege of commuting the labour due by him for the year following that in which the default was committed.

We now come to the consideration of the Ordinance No. 10 of 1861, which had the effect of relieving Police Courts of the large number of prosecutions which had accumulated on their trial rolls.

Under this Ordinance, the appointment and removal of division officers are vested in the hands of the District Road Committee, their election having been abolished.

Every householder is, whenever thereto required by the division officer (or person acting on his behalf), to prepare a list, in a given form, of the name and age of every *male* resident in his house. Of every one liable under the Ordinance, the division officer is to enquire whether or not he elects to commute, and the purport of the reply is to be entered on the householder's list.

The liability to labour is retained as before, as also the provisions for exemption. But power is vested in the District Road Committee to demand, before resorting to prosecution, instant payment of double commutation from those who fail on due notice to work.

Those who elect to commute the labour due are allowed permission to make a money-payment of three shillings; and any person who has once elected to commute remains liable for the annual amount of commutation until he gives notice to the contrary in writing.

After the division officer has prepared, from the householders' lists, a list of intending labourers and commuters, the procedure followed in the calling out of labour and the collection of the commutation money, under this and the Ordinance No. 5 of 1866, may be stated *seriatim* as follows :—

As to Labourers.

The division officer notifies to them the time and scene of labour.

At the scene of labour, the officer in charge of the works exacts the labour and grants receipts in settlement of the labourer's liability.

If the labourer fails to attend at the works, the division officer reports him to the Chairman of the Provincial Road Committee, who thereupon directs payment of double commutation or prosecution before the Police Court.

In case of non-payment of double commutation, the defaulting labourer is tried by the Police Court and punished by a fine not exceeding Rs. 10.

Where the fine is not paid, the usual course for the recovery of fines is resorted to as if imposed by a Police Court.

As to Commuters.

The commuter may pay the division officer the commutation money at the single rate, if able to pay it before the 1st April. Thereafter, and within another date (varying from 30th April to 30th June), he may pay that amount with an additional 25 cents.

Failing in this, he is reported by the division officer to the Chairman of the Provincial Road Committee as a defaulter, when he becomes liable to pay double the amount of the original rate.

The Chairman issues distress for the recovery of this amount and realizes it from the proceeds of the sale of the defaulter's property.

If the defaulter is possessed of no property, the Chairman certifies to the Police Magistrate that the defaulter is not possessed of sufficient property. (See Government Circular, cited in next page.)

The Police Magistrate thereupon issues notice to the defaulter to appear and show cause why he should not pay commutation at the double rate, or in failure be committed to prison.

If the defaulter does not appear and pay, the Police Magistrate issues warrant of arrest.

When brought up, the defaulter is committed to prison, nominally for six days.

PART II—THE ORDINANCE OF 1861.

For the purpose of carrying out the object of our appointment, we issued a series of questions to all public servants who have the practical working of the Ordinance No. 10 of 1861 in their hands. We herewith forward their replies and proceed to summarize so much of the information contained in them as will throw light on Parts III. & IV. of this report.*

The householders' lists referred to in clause 42 of Ordinance No. 10 of 1861 are not, as a rule, called for annually, but at intervals of from three to five years. In some districts, as many as ten years have elapsed since they were last called for.

The election which taxpayers are at liberty to make by intimating in these lists whether they will commute or not, does not appear to be exercised by them. This, it is stated, arises in some places from the people being ignorant of their right to work, while in others, it is said, they are not aware that they possess any option at all in the matter.

There is a consensus of opinion that when a person has elected to commute but becomes a defaulter, such default should annul his previous election, without it being necessary for him to give the notice required by clause 60.

There have been some cases where persons, who should have been exempted from labour, have been committed to jail as defaulters. It does not appear that defaulters are always brought up before some responsible officer of the District Road Committee invested with authority to release them on good cause shown ; and in the present state of the law, the Committee has no power to delegate its authority in this respect to anybody, though as a matter of fact the chairman of each Committee exercises it in its name. It thus happens that when the Chairman is absent from his station, or when defaulters are taken before a Magistrate at a town in which a Chairman does not reside, there is no one competent to deal with claims for exemption. It has been decided by the Supreme Court that a Police Magistrate has no other alternative but to commit the person sent before him.

On the money collected by division officers they are allowed a commission, but not on the labour called out by them, except in one or two districts where a reduced rate of commission is allowed.. There is thus a strong inducement for division officers to endeavour to enforce the payment of commutation rather than to attend to the requirements of the law in regard to the calling out of labour.

It is admitted that the division officers in each district are not sufficiently numerous for the effective collection of the tax, or for the notification of the scene of labour. In communicating with the people for these purposes, division officers are assisted by the local minor headmen, who however do not receive any share of the remuneration allowed to the division officers, while it has to be remarked that by clause 48 of the Ordinance "all headmen and all police and peace officers" who refuse to aid and assist division officers in the discharge of their duties are subject to a fine not exceeding £5. The returns submitted to us disclose the fact that in the districts

* The replies referred to are not printed.

where the proportion of division officers to the population is greatest, collections without distraint of property are highest. A few figures may be given in support of this :—

	Per-centage of collection without Distress.	Average population in each Division.	Average No. on Lists of each Division.
Anurádhapura	90	3,300	850
Jaffna	81	3,640	920
Kurunégala	75	1,250	1,110
Galle	74	7,000	1,400
Batticaloa	75	8,100	1,700
Negombo	68	13,000	2,630
Colombo	64	16,000	3,080
Kalutara	58	11,000	2,380

At Mátara, too, 81 per cent. was collected without distress, but this was under a system (abandoned since 1881) in which local headmen were utilized in more than one-half of the district.

As regards the distance to which a labourer is called out from his home, the average in most districts is between six and seven miles.

The subsistence money referred to in clause 57 has never been paid to labourers, save once in the Kalutara District when scarcity and distress prevailed.

There does not appear to be any necessity for altering the time fixed by clause 61 for the payment of the commutation money. The present date, 1st April, is immediately after a large harvest, when the people are in possession of some money. But we think it not out of place to suggest that other taxes payable in money, such as the grain tax under the new commutation system, should not fall due simultaneously with the road tax, but should be postponed till after the Yala harvest, which is reaped in September or October.

In the collection of the road tax, complaints have been made that division officers have not granted receipts at the time of payment, thus rendering a person liable to pay the tax twice over, or to arrest as a defaulter.

It is also admitted that division officers have defrauded District Road Committees by issuing receipts on unauthorized printed forms or even on plain paper. To guard against such irregularities, it has been the practice in some districts to stamp printed forms of receipts with the signature of the chairman, or some other device, but this is of little use unless the issues of such forms be carefully checked. Equal care should be taken by the Public Works Department in regard to the issue of vouchers to be granted to labourers when they have discharged their liability.

For failure to pay the tax on or before the 1st April, the dates fixed by the Road Committees under clause 63 for the recovery of the additional rates vary as follows :—From 30th April to 30th June for the additional rate of 25 cents, and from 1st May to 1st July for the double rate.

It appears that there has been some irregularity in carrying out the procedure prescribed by § 64 of Ordinance No. 10 of 1861, and §§ 3 and 4 of Ordinance No. 5 of 1866, and on the 2nd April, 1878, the Government issued the following circular to Police Magistrates :

I am directed to inform you that some instances of irregularities in the commitment of persons who have made default in the payment of commutation due under "*The Road Ordinance*, 1861," have been brought to the notice of the Governor, and that His Excellency desires that care be taken in future to follow strictly the procedure prescribed by section 64 of "*The Road Ordinance*, 1861," and sections 3 and 4 of the Ordinance 5 of 1866.

In no case is it competent for the Police Magistrate to commit a defaulter for non-payment of double the amount of commutation, unless he has received from the Chairman of the Committee an order in the form B. set forth in the schedule to the Ordinance 10 of 1861. If after the receipt of this order the amount due is not paid into court, and if the Chairman of the Committee shall certify to the court that the defaulter named has no sufficient property, it will then be the duty of the Magistrate to commit the defaulter to prison, in the same manner as if a fine had been imposed by the court equal to the amount mentioned in the order of the Chairman of the Committee, and a return had been made to the warrant of distress that no sufficient distress could be had thereupon.

The order and certificate of the Chairman of the Committee should be carefully preserved amongst the records of the court.

We observe that in many instances distress warrants for the recovery of double commutation from defaulters are not issued to the Fiscal or village headmen, but to division officers, who being entitled to the fee allowed by Ordinance No. 5 of 1866, are tempted to defer a prompt recovery of the commutation at single rates. Endeavour has been made to counteract this influence by the payment of increased commission on early recoveries and none on those at double rates. But this is practically adopting a course which was proposed when the Ordinance of 1861 was under discussion, but was strongly objected to.

In the execution of these warrants, it has been found that oppression and extortion have been practised.

In asking for suggestions as to the best way of providing for the exaction of labour and of deferring, for as long a period as possible, the commitment of defaulters to prison, we submitted for consideration the following schemes, viz. :—

(*a*) To leave it open to any one who chooses to pay at single rates by a certain date, and to treat all persons who have not paid at such rate before that date, as electing *to labour*, and liable, in default of performing labour when called upon, to prosecution before the Police Court or Village Council.

(*b*) Or—leaving the procedure for recovery of commutation to stand *pro tanto*—to keep defaulters together under the officers of the Road Committee for a specified time at a convenient distance from the working place, feeding and sheltering them, until they have worked for a certain number of days, and to resort to a prosecution only against those who evade such work.

Some—and they are certainly experienced officers—would prefer the maintenance of the existing procedure, but a majority consider that scheme (*a*) is good, and preferable to scheme (*b*), but have nothing of a more practicable character to suggest.

PART III.—EXTENT AND CAUSES OF FAILURE.

The success with which the present system has worked, as regards its two-fold object of collecting labour and commutation money, may be judged from the following figures, made up in round numbers from the returns furnished to us for the five years 1876–1880.

The total number of persons in the Island who were bound each year (on an average for the five years alluded to) to work on the roads was 517,000, of whom over 85 per cent., or 456,000 persons, elected to commute. The remaining 61,000 persons remained liable to the performance of labour.

Of the 456,000 persons who elected to commute, 25,700* appear to have been exempted or to have died, 283,900 paid their commutation at the single rate, 56,300 paid it at the same rate with the additional 25 cents, and 8,400 paid it at the double rate, leaving the enormous number of 81,700 persons to be dealt with according to law as defaulters. But the measures taken were successful only in the case of 35,750 persons, recoveries being made from 25,250† persons, and 10,500‡ being committed to prison. The remaining 45,950 persons appear to have evaded their liability with impunity.

Turning to the 61,000 men who remained liable to work, we find that about 25,000 performed labour, and that 2,300 were prosecuted and punished for failing to work, leaving 33,700 defaulters unaccounted for.

That system is undoubtedly the best which not merely collects labour and money most successfully for the purposes of the Provincial Road Committees, but collects them without undue pressure upon or demoralisation of the people. In both these respects, we have to report that the system referred to us for enquiry has signally failed; for if we deduct from the 81,700 commutation defaulters the 25,250 from whom recoveries were made by means of legal proceedings, we shall have 56,450 persons as the number who contributed nothing at all to the funds of the Provincial Road Committees; while, deducting from the 61,000 labourers the 25,000 who worked, we shall have 36,000 labour defaulters who proved equally valueless. Annually, therefore, in the aggregate, these 92,450 defaulters represent, at the rate of Rs. 1·50 per head, the sum of Rs. 138,675 wholly lost to the Road Committees. On the other hand, it must be remembered that the committal to prison yearly of several thousands of these defaulters, and the herding of them with real criminals, cannot but vulgarise the idea of criminality and cause imprisonment to lose much of its deterrent force. The returns of the Inspector-General of Prisons, indicating, as they do, that from 1875 downwards the number of men condemned to jail for being in default has increased steadily from 2,566 to 14,768 in 1881,§ support our belief that the disgrace and fear of prison life are not having their due influence upon the minds of those amenable to the Road Ordinance.

The fact that 85 per cent. of those liable to work elect to commute sufficiently accounts for the corresponding fact that the vast majority of those committed to prison are commutation defaulters. It is important to ascertain the reasons of this wholesale election, which has resulted so prejudicially alike to the commuters and the Road Committees. Not to speak of the hope of the commuters to be able to pay in due time, it appears to us that the inequalities in the present modes of procedure for collecting labour and money tend not a little to the discouragement of labour and the adoption of the right to commute. The Ordinance throws upon those liable to labour the necessity of working for six days without providing them with food or shelter of any kind, even though as a rule the scene of labour is removed from the homes of the labourers by 7 or 8 miles. While, therefore, in most cases the inconvenience of having to travel this distance before the commencement and after the close of each day's work is undoubtedly great,—in the case of others, who are called away to a still greater distance, this inconvenience amounts really to their banishment from their families for a period of over six days, entailing the additional hardship of their having to maintain themselves and find provision for their families in the interval. But the discouragement to labour does not end here. The labourer who makes default is comparatively quickly punished, and punished by a fine not exceeding Rs. 10, which, from the poverty of the labourer, means his incarceration for a term varying from a month downwards, at the discretion of the magistrate awarding the fine; whereas the commuter is free to postpone payment from time to time, often for more than a year, and when at last he is arrested and brought up, he becomes liable to imprisonment for only six days, which in practice dwindles down to three or four. Added to all this is the fact that division officers are allowed a commission for money collected but not for labour called out. It therefore is much to their interest to encourage commutation from the time of the preparation of the lists down to the recovery of the double rate, and to avoid the unremunerated trouble of calling out labour.

In considering the inducements to commute, we have unavoidably touched upon some of the causes which lead to default on the part of electors. We shall only repeat that if labour were

* This includes exemptions from those liable to labour also, but as the returns before us do not show how many of the exemptions are from this class, we have for purposes of convenience taken them as exemptions from the class which had elected to commute.

† By distress without sale, 16,362; by distress after sale, 2,412; paid after arrest, 6,558; total recovery from 25,232 men.

‡ These figures are taken from the returns of the District Road Committees, and are in excess of the prison returns. This is due to their including defaulters who had become liable to be sent to prison, but who were permitted to work out their liability without being incarcerated.

§ In 1875; 2,566; 1876, 2,823; 1877, 3,251; 1878, 8,129; 1879, 7,532; 1880, 8,611; 1881, 14,768.

encouraged and commutation defaulters more speedily and severely punished than they are now, there would neither be the reckless desire which exists at present to commute, nor so large a number of defaulters.

As regards labour defaulters, there is no reason whatever why over 50 per cent. of those who bound themselves to work should prove so utterly useless to the Road Committees. But the causes of this default are not far to seek. In the first place, division officers are not sufficiently numerous to notify to labourers the scene of labour. In the second place, we have already pointed out that the distance to which they are called away from their homes is inconveniently great, if not excessive. In the third place, great laxity prevails not merely in the collection and exaction of labour, but also in the prosecution and punishment of the defaulters. Under these circumstances, the labourer is not over-mindful of his engagement to work.

PART IV.—RECOMMENDATIONS.

We propose for adoption the following scheme for exacting the labour due under the Road Ordinance :

(*a*) We would leave as at present the liability to perform labour and the limits of age and right to exemption. (See clauses 49, 50, 51, 52, of Ordinance 10 of 1861.)

(*b*) We would allow every person to freely commute, without any previous notice, paying single rate till 1st April, and with an additional 25 cents till 1st May. Such payment to be made to the division officer without any demand. This recommendation would entail the repeal of clause 42, so far as it refers to election, and the total repeal of clauses 60, 63, and 64.

(*c*) All who have omitted to exercise by the 1st May this right to commute should remain liable to work, and to be called out as laid down in clause 53. Where written notice is given, provision should be made for its service on each individual therein described, by being left at his last place of residence, if personal service cannot be secured.

(*d*) The District Road Committee should have power to call out labour before the 1st May, but no person should be liable to any penalty for failing to attend.

(*e*) After the 1st May, every male liable to labour *and failing to attend when noticed* should be served with a further notice (signed by the division officer) to pay to the division officer, within ten days, a sum equal to double the commutation fixed for the district. Payment of the double commutation should free the defaulting labourer from further prosecution. But such defaulter, in the first year in which he becomes liable, should be allowed to pay at the single rate. Clause 54 of the Ordinance should be altered accordingly.

(*f*) We would abolish distress warrants and the process under clause 64 of Ordinance 10 of 1861, and sections 3 and 4 of Ordinance 5 of 1866, and instead, we would provide for the following measures being taken. On affidavit being made by any person, before a competent Justice of the Peace, of the service of the notices required in paragraphs (*c*) and (*e*) and of the default to labour and the failure to pay, it should be competent for such Justice of the Peace to issue a warrant for the arrest of such defaulter. Provided such affidavit be sworn to within two months of such default.

(*g*) When such defaulter is brought up—unless he immediately pays the double commutation due by him and a further sum not exceeding 50 cents, being cost of his arrest—he should be committed to the custody of the Fiscal, to be sent before the nearest Police Magistrate together with the affidavit referred to in the previous paragraph.

(*h*) The Police Magistrate should be required to accept such affidavit as *primâ facie* evidence against the defaulter, and should call upon the defaulter to show cause why he should not be sentenced to pay a fine of rupees ten. It should be competent for the Magistrate to hear such objection as may be made by the accused and to allow any reasonable postponement which may be required, and to adjudicate thereon as if such matters were before him in his ordinary jurisdiction.

(*i*) In failure of sufficient cause being shewn, and of the payment of the fine (if one has been inflicted) within such time as the Magistrate may fix, the defaulter should be committed to prison for one calendar month at hard labour. Notice of all proceedings should be given by the Magistrate to the Chairman of the District Road Committee, and all such decisions should be open to appeal by the accused person as well as by the Chairman of the District Road Committee.

(*k*) The Committee should have power to notice those liable to work as frequently as it choses before having recourse to the above steps, and to call out arrears of labour not utilised on minor roads within the year, until the 30th April of the subsequent year.

The advantages of the scheme which we recommend consist in the retention of the distinguishing principle of the original Ordinance—viz., the liability to labour—while all so inclined to commute this liability are permitted to do so by a money payment when convenient. The so-called election is dispensed with, and a man is permitted to work or pay as suits his circumstances from year to year. When, however, he fails from any reason to commute, and neglects or refuses to work, he is treated as an idler and punished as such with speed and severity. In his desire, therefore, to avoid the rigorous punishment indicated above (para *i.*) he would, we believe, take special care to discharge his liability by working on the roads. We also get rid of distress warrants and their attendant evils.

In this connection, we would advert to the great difficulty which Provincial Road Committees have experienced in the preparation of some of the forms necessary for the recovery of the commutation money. Prior to the Ordinance No. 5 of 1866, the Chairman of a Provincial Road Committee did not possess the power of distraint, and had therefore to enforce payment of the commutation money through a Police Court. For this purpose, he transmitted to the Police Court of the district in which the defaulter resided an order (in the form given in schedule B. of Ordinance

No. 10 of 1861) directing the defaulters therein named to pay forthwith into that Court the respective sums set opposite to their names. Thereupon the Police Magistrate proceeded to deal with the defaulters in the same way as if he had imposed on them fines for similar sums. When these moneys were recovered, the Police Magistrate paid them over to the Chairman of the Road Committee (clause 64 of Ordinance No. 10 of 1861). In order to avoid the delay and inconvenience arising from this circuitous recovery, the Ordinance No. 5 of 1866 empowered the Chairman (by clause 3) to seize and sell, if necessary, any property belonging to the defaulter; and to meet the case of the defaulter who was possessed of no property, it enacted as follows (clause 4):

If the person in default be possessed of no sufficient property, the Government Agent or Assistant Government Agent, or the Chairman as aforesaid, shall certify the same to the Police Court of the district in which the money ought to have been paid, and such court shall proceed to deal with the person in default as if—&c.

The facilities afforded by these clauses could only be taken advantage of by accepting at the same time the burden of preparing distress warrants and certificates of insufficient property. But for many years these documents were framed upon the principle on which the order (B) for the recovery of the commutation money was framed, viz., so as to include in one warrant or certificate the names of several defaulters. The clerical labour involved in the completion of these papers was not felt under these circumstances to be specially difficult. In 1878, however, the Government issued a Circular pointing out—on what authority, we know not—that the Ordinance No. 5 of 1866 did not dispense with the order (B), but that that order was as essential in law as the certificate of insufficient property, to enable the Police Magistrate to assume jurisdiction over the defaulter. And in another Circular, dated 24th November, 1881, and addressed to the Chairmen of the Provincial Road Committees, they were directed to adopt in lieu of the existing one a very full and formal certificate of insufficient property, and they were further informed of the opinion of the Queen's Advocate that there must be a separate certificate in respect of each defaulter. The increase of work caused by these Circulars is said to be enormously great, and Provincial Road Committees complain that it would be impossible to supply, within reasonable limits of expense, the clerical labour required, so as to be able to enforce in due time the payment of the commutation money, or to secure the punishment of the defaulters with any degree of success. As the average for the five years, 1876-1880, gives 82,700 commutation defaulters, the time and cost required for preparation and filling up of so many orders for recovery of commutation and certificates of insufficient property may be conceived. It must also be remarked that the presentation of so large a number of these papers to Police Courts would considerably add to the work of those Courts and result in serious delay in the issuing of warrants. In a theoretical point of view, it is no doubt desirable that the case of each defaulter should be complete in itself and based upon proper materials duly appearing on the record, but it is of vital importance that the efforts of the Road Committees to collect as speedily and inexpensively as possible the arrears of commutation should not be defeated, by forcing them to attempt too much in the way of perfection in legal proceedings. The fact that the Ordinance No. 10 of 1861 initiated proceedings before a Police Court by an order in which the names of several defaulters were allowed to be included, favours the inference that the Ordinance No. 5 of 1866, which was introduced avowedly to facilitate recoveries, does not require a separate certificate for each defaulter. There are no words of express enactment to that effect in that Ordinance.* But whichever be the correct construction to put on the existing law, there can be no question as to the inexpediency of taxing Road Committees with a clerical labour which they feel unable to undertake without sacrificing one of the main objects for which they were instituted, namely, the speedy collection of the commutation money. The simple and uniform procedure of the scheme we have put forward, while doing away with many of the forms now used—such as distress warrants, orders for recovery of commutation, certificates of insufficient property, &c.—admits of others, such as the affidavit of default, warrant of arrest, and the preliminary commitment of the defaulter to the custody of the Fiscal; and if these documents were required one for each defaulter, the Road Committees would undoubtedly feel the burden of preparing them, though not to the same extent as now, for the labour of working our scheme is distributed amongst several hands. With the view of facilitating the recovery of the commutation money, we would recommend that the forms we have referred to should be prepared upon the same principle on which the order (B) was permitted to be prepared under clause 64 of the Ordinance No. 10 of 1861, namely, by the inclusion of several names in the same form. But we would confine the applicability of each form to only such defaulters who live in the same village and who have committed default on the same day. These limitations would guard against mistakes and promote easy reference.

Our scheme, it will be perceived, invokes the aid of the Police Magistrate only for the purpose of securing a deterrent penalty when the defaulter's body is produced before him; while ample power is reserved to secure the rights of all persons concerned and to guard against the improper committal of any one to prison. The preliminary steps will be probably taken before the Chairman of the District Road Committee, who is invariably a Justice of the Peace, and he will have ample opportunities to keep the division officers and headmen up to their duty.

We would further suggest as tending to improve the general working of the Ordinance, that—

(*l*) There should be recorded in the division officer's lists the age of each male and the year in which he became first liable.

(*m*) The District Road Committee should have power to grant authority in writing to any person to deal with claims to exemption. This will provide for the claims being attended to in the absence of the Chairman, who is now the only person who can act.

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* Cf: the practice sanctioned by the Supreme Court in prosecutions under the Ordinance No. 11 of 1865, regulating contracts for hire and service. See Appendix (A) for judgment of Cayley, C.J., in P.C. Dikoya 5,090.

(*n*) Provision should be made for the remuneration of division officers for labour supplied as well as money collected, and the per-centage of remuneration should be at the same rate for both services.

(*o*) The distance to which a labourer may be called out should be reduced to five miles from his residence, whether for principal or minor roads.

(*p*) All receipts granted for money or discharges for labour performed should bear adhesive stamps used in a manner similar to that followed in the Telegraph Department, viz., one-half on the portion issued and the remaining half on the duplicate retained by the division or other issuing officer. We understand on enquiry, that postage stamps cost 10 pence (English) per 1,000 (exclusive of the first cost of the die), so that the cost of a double stamp of the same size would be about a rupee per thousand. Provision should be made for rendering unstamped discharges invalid, and when this becomes known, there would be a great check on fraudulent practices Before being issued for use, the year to which it applies should be marked on each stamp.

(*q*) The number of division officers should be increased either by the utilization of the local headmen or by the more extensive appointment of other qualified persons with smaller districts than at present. We think it might be left to each District Road Committee to subdivide its district into divisions, giving due notice thereof, and without the necessity of any publication by Government in the *Gazette*.

The following proviso (clause 75) which we find in the original draft circulated in 1861, but which does not appear in the Ordinance as passed, might with advantage be introduced :—

It shall be lawful for the officer in charge of any such works as aforesaid, to receive from any person bound to perform labour thereon, broken stone, gravel, or other material required for such work, in lieu of the labour due by such person. And the Provincial Committee shall fix the quantity of each description of road material which may be delivered in lieu of a day's labour; and the person delivering any such material, approved of by such officer, shall be allowed to set off the quantity so delivered against the labour due from him; and shall be deemed to have performed the labour due and be entitled to a certificate of such performance, so soon as he shall have delivered a quantity of the required material equivalent to six days' labour at the rate so fixed as aforesaid, or which quantity of material delivered, together with labour performed by such person, shall be equivalent to the six days' labour due from him.

It has been urged upon us that prior to sending a man before the Police Magistrate a further effort should be made to force him to labour without privation of his liberty. We are not hopeful of the success of such a measure, though it may be possible to work it occasionally under the supervision of an energetic officer. While therefore we do not include it in our scheme, we think no harm can accrue, and possibly good, if provision be made that when a defaulter is brought before the Justice of the Peace as already provided, he should be offered, *with the consent of the Chairman of the District Road Committee*, the option of signing an undertaking to labour on some public work, irrespective of its distance from his residence, for 12 clear days commencing then and there, on condition of the District Road Committee making provision for suitable shelter and subsistence during the period. A defaulter failing to work the full time specified and in a satisfactory manner without due excuse, would of course remain liable to be re-arrested and sent before the Police Magistrate. The Chairman of the District Road Committee should have no other punitive power in such cases than to turn off any man who failed to do a proper day's work. As bearing on this proposal, our attention has been called to the following extract from a discussion at the International Penitentiary Congress of 1872 as to the possibility of "replacing short imprisonments and the non-payment of fines by forced labour without privation of liberty."

Count A. Foresta (Ancona), who brought the subject forward, said :—

"In my experience as Magistrate, I have always been struck with the great inconvenience of confining in prisons persons sentenced to imprisonment of short duration. While there is not time to instruct or reform, they unhappily find time to get corrupted.

"On the other hand, the number of these prisoners being very large, they are very costly to the State. Moreover; during their detention their families suffer, and are often themselves driven to crime by want. Pondering these circumstances, I have thought they might be diminished, if not entirely got rid of, by substituting for imprisonment, obligatory labour during the day, leaving the condemned free to return to their families in the evening like ordinary labourers. This idea is, I believe, quite novel, not having yet been anywhere adopted.

"It seems to me that in every important town in every capital, there are always a number of works and public services to which those condemned to compulsory labour might be appointed. You have hospitals, where you can make them occupy a number of salaried offices. You have model farms, you have highway and port works, finally you have prisons and penitentiaries, where labour is organised, and where you can easily employ in separate workshops those condemned to obligatory labour, and they might also be employed for transport or other foreign services. The Head of the Police or other official charged with this service would have a list of all the condemned persons of the province, with remarks on their aptitude for a particular kind of work. He would know the necessities of the public services or workshops, where he could place them at suitable work. They would be imprisoned and kept in separate cells in the communal prison. Under this threat they would certainly not fail to perform their duty. The produce of their labour would be partly given to them for the wants of their families, and would partly appertain to the State as compensation. The condemned would have his hours of compulsory labour like the free workman, and in the evening would return to his house where he would act as he pleased."

Sir John Bowring thought the suggestion in the Count's paper could be more effectually carried out, if the condition of individual offenders and the circumstances of the locality were taken into account. In an agricultural district the men would have agricultural aptitudes and should be employed in that way, while in towns they would be accustomed to various trades which might be carried on in prison.

The Rev. C. M. E. Collins (Cornwall) agreed with the Count, except as to forced labour. He had long had misgivings as a Magistrate whether he had not indirectly helped men to become criminals rather than deterred them, owing to the matter-of-course way in which short imprisonments were substituted for fines. Imprisonment should be made an object of dread by surrounding it with disgrace and resorting to it in as

few cases as possible. By sending men to prison for a mere statutory offence the feeling of shame was broken down, whereas self-respect ought to be maintained.

Mr. J. A. Bremner (Manchester), as a Magistrate, deemed the question a more important one than it appeared at first sight. One object of punishment should be equality, but the English law contained great though unintentional irregularities. A Magistrate frequently imposed a fine with seven or fourteen days' imprisonment in default.

The Chairman (Baron Von Holtsendorf) would point out Prussia in proof of the feasibility of the scheme. For twenty years there had existed a law providing labour as a substitute for a fine in the case of offences against the Forest Laws and wood-stealing."

W. D. WRIGHT.

P. RÁMA-NÁTHAN.

Colombo, 11th May, 1882.

E. ELLIOTT.

ALLANSON BAILEY.

APPENDIX.

A.

JUDGMENT of the Supreme Court in P. C. Dikoya 5,090.

In this case, 55 defendants have been charged in one plaint and tried together for the offence of quitting the service of their employer, without leave or reasonable cause, and have been convicted. *Strictly speaking, the offence with which each defendant has been charged is a distinct offence,* for an ordinary contract of service is a several contract on the part of each servant, and not a joint contract on the part of all. However, the practice of joining several defendants in one plaint in cases of this kind has been frequently upheld in this court, and when the defendants are not shewn to have been in any way prejudiced by this course being adopted, *I see no reason for holding that,* in opposition to previous decisions, *a joinder of several defendants in these cases is a misjoinder.*

Still it has often been pointed out that the number of defendants charged together in these cases should not be so large as necessarily to interfere more or less with the fair and complete investigation of the case of each defendant. Fifty-five is an inordinate number to be included in one charge. Such a joinder must necessarily prejudice the defendants. A whole gang seems to have been charged, and the defendants are thus all prevented from giving evidence in favour of each other. The judgment of Sir Edward Creasy, in case No. 71,470 of the Police Court of Mátara (Grenier's Report, P. C. 1873, p. 28) fully discusses this subject, and points out the inconvenience and consequent possible injustice of joining an inordinate number of defendants in any charge of this kind. It should also be observed in this case that there has been no proper investigation into the case of each defendant, as is necessary in the trial of a criminal charge. Fifty-five persons were brought before the court and the complainant, the only witness, stated: "I charge the defendants, who are coolies in my employment, with desertion. They left on the 4th instant." This is all the evidence of the contract of service and the desertion. This vague and general statement is insufficient to warrant a conviction.

B.

COMPARATIVE STATEMENT compiled from the Returns of the several Road Committees relating to the working of the Road Ordinance.

DISTRICT.	Proportion of Population to Numbers on Division Officer's Lists.	Average Population in each Division.	Average No. on lists of each Division.	Per-centage of recoveries without distress.
Colombo	5·0 to one	16,000	3,080	64
Negombo	4·4 ,,	12,000	2,570	68
Kalutara	4·6 ,,	10,000	2,380	57
Kégalla	4·3* ,,	982	216	66
Ratnapura	4·8* ,,	9,600	1,900	61
Kandy	4·1* ,,	550	133	66
Nuwara Eliya	—	—	2,070	73
Badulla	4·7* ,,	—	—	76
Mátalé	4·7* ,,	470	100	72
Galle	5·0 ,,	7,000	1,400	75
Mátara	4·4 ,,	13,000	2,810	81
Hambantota	5·4 ,,	14,000	2,600	70
Kurunégala	3·8* ,,	4,250	1,100	75
Puttalam	4·9 ,,	6,000	1,180	76
Jaffna	3·9 ,,	3,640	920	81
Mannár and Mullaittívu ...	4·2 ,,	1,400	324	—
Batticaloa	4·5 ,,	8,100	1,700	75
Trincomalee	4·3 ,,	4,500	1,040	—
Anurádhapura	3·9 ,,	3,300	850	90

* Exclusive of Immigrant Tamils.

C.

REMARKS of the several Provincial and District Road Committees on the recommendations and suggestions contained in Part IV. of the Report of the Road Ordinance Commission.

Recommendations of the Commission.	Remarks.
A.—To leave as at present the liability to perform labour, and the limits of age and right to exemption. (See clauses 49–52, Ordinance No. 10 of 1861.)	No remarks.
B.—To allow every person to freely commute, without any previous notice, paying single-rate till 1st April, and with an additional 25 cents till 1st May, such payment to be made to the division officer without any demand. (This recommendation entails the repeal of clause 42 so far as it refers to election, and the total repeal of clauses 60, 63 and 64.)	The Chairman, District Road Committee, Kalutara, suggests that the time for payment of the tax be extended to end of April—*i. e.*, after the Siphalese New Year, and recommends that in default of payment of the tax by end of April, the defaulter be liable to double-commutation. He sees no advantage in the imposition of the additional 25 cents payable only for one month; if the single-rate is not paid by end of April it should be at once doubled. The Chairman, District Road Committee, Mátara, suggests that the additional amount leviable when payment is made in May be 50 cents, or the liability to labour commence from April 1st. The Chairman, District Road Committee, Trincomalee, suggests that the period of payment at single-rate be extended till end of May or till end of April; time to pay the single-rate, with the additional 25 cents, should be till the end of July, after that the double-rate should be exacted. The Road Committee to have also the power to exact a lower rate of commutation than the ordinary one in years of scarcity, or in districts where the people had suffered from loss of crops, &c. The Chairman, Central Province, suggests that clause 42 of Ordinance No. 10 of 1861 be made more stringent, and imprisonment at hard labour be added to the penalty; clause 60 be amended so as to allow of choice being made from year to year; clause 63 should fix an additional 25 cents if commutation is not paid by 1st April, and double-commutation between 1st May and 30th June; clause 64 be amended and direct that all persons electing to commute, and who have not paid their commutation by 31st March, or commutation plus 25 cents by 30th April, or double-commutation by 30th June, shall be arrested on certificate of Provincial Road Committee and taken before the Police Court and be fined Rs. 10 or sentenced to be imprisoned with hard labour for one month unless time to pay is asked for and substantial security to pay within a month be tendered at the time.
C.—All who have omitted to exercise by 1st May this right (see B.) to commute, should remain liable to work and to be called out as laid down in clause 53 (Ordinance No. 10 of 1861). Where written notice is given, provision should be made for its service on each individual therein described, by being left at his last place of residence, if personal service cannot be secured.	The several Road Committees remark that this recommendation would deprive the roads of labour during the early months of the year, which are the best and most important for roadwork.
D.—The District Road Committee should have power to call out labour before the 1st May, but no person should be liable to any penalty for failing to attend.	It is pointed out by the majority of the Chairmen that it is useless and unadvisable to give the Committees a power which they have no means of enforcing.

Recommendations of the Commission.	Remarks.
E.—After the 1st May every male liable to labour and failing to attend when noticed, should be served with a further notice (signed by the Division Officer) to pay the Division Officer within ten days a sum equal to double the commutation fixed for the district. Payment of the double-commutation should free the defaulting labourer from further prosecution. But such defaulter, in the first year in which he becomes liable, should be allowed to pay at the single-rate. Clause 54 of Ordinance No. 10 of 1861 should be altered accordingly.	The Chairmen agree in opposing the second clause of this recommendation. As regards the first clause— The Chairman, Eastern Province, observes that much clerical labour and loss of time would be involved in the serving of two notices. The notice to labour should be accompanied by an intimation added to the notice that failure to labour would render the defaulter liable to proceedings for the recovery of a sum equal to double the commutation of the district, and the Committee do not see the expediency of exempting the defaulter from the double-rate on the first occasion of default. To do so would throw on the officers of the Committee the labour of searching the records to ascertain whether or not a default had been previously committed in the case of each defaulter in each year. And the Chairman, Central Province, that the recommendation of the Commissioners involves a vexatious, expensive and unnecessary multiplication of notices, and is directly opposed to the efficient working of the Ordinance. Prompt, certain, and severe punishment should at once follow any failure to attend to labour when noticed. Clause 54 of the Ordinance should be amended by striking out the provision allowing payment of double-commutation before prosecution. The punishment under clause 54 and under clause 64 should be the same as suggested above under head (B.)
F.—Distress Warrants and the process under clause 64 of Ordinance No. 10 of 1861 and sections 3 and 4 of Ordinance No. 5 of 1866 to be abolished, and instead provision to be made for the following measures being taken:—On affidavit being made by any person before a competent Justice of the Peace of the service of notices required in recommendations C. and E. and of the default to labour and the failure to pay, it shall be competent for such Justice of the Peace to issue a warrant for the arrest of such defaulter, provided such affidavit be sworn to within two months of such default.	The proposal to abolish distress warrants is generally approved by the Chairmen. In regard to the procedure suggested for adoption— The Chairman, District Road Committee, Kalutara, observes that the procedure will entail much expense on the Fiscal's Department for maintenance of prisoners so detained, and the expense will be much increased by the procedure of the recommendations in B. and C. If a man is in default for a sum of only Rs. 3, it is obvious that he is not in a position to give bail, so that he will be detained in jail until his case is decided; he is to be allowed reasonable postponements, and, ultimately, an appeal; his case will go down on the roll of the Police Court and be subject to the usual and manifold chances of delay in a Police Court—*e.g.*, absence of the Police Magistrate on duty as Coroner, &c.; all the time the unfortunate defaulter is under remand at Government expense, and it is quite certain he will in every case of sentence avail himself of his right to appeal. Objects *in toto* to the interposition of the Police Magistrate in the procedure. If the Chairman, as Justice of the Peace, is to be trusted to issue his warrant for the arrest of the defaulter, he is competent to continue that procedure to its legitimate issue and conviction of the defaulter, subject to an appeal to the Supreme Court; but if the Police Court is to be introduced, there is no reason for altering the present procedure, and the Police Magistrate should be confined to his present power of simply committing the defaulter. If each case is to be made the subject of an independent judicial enquiry, the time expended over the committal of defaulters will be fatal to the interests of the Road Committee and bring its business to a worse dead-lock than is the case at present. And the Chairman, Eastern Province, that it appears to him that the procedure recommended in F. and G. is in a great measure open to the same objection as the irregular procedure that has been desired to be adopted for the present—viz., that it involves a great deal of clerical labour, leading to much loss of time with no corresponding advantage in securing the prompt recovery of the Committee's dues. As regards the proposal F., enquires why there should be an affidavit, or, at any rate, an affidavit for each defaulter. As the information needed to be inserted in the affidavit can be furnished only by some officer of the Committee, it seems to him that the certificate of the Chairman embracing a number of defaulters will be just as valuable in the view of its being an exposition of the truth, as a series of affidavits; for his certificate can be framed from precisely the same information as the affidavit

The object in view being (1) to prevent injustice to those alleged to be defaulters, and (2) to expedite the recovery of the tax, he cannot see that any more injustice is likely to be worked by a certificate similar to that required under the present Ordinance than there will be room for if affidavits be presented regarding each individual; whereas there can be no comparison between the two systems as regards the lightening of the clerical labour involved. That, in his opinion, the two objects sought after would be gained if the Chairman's certificate to the Police Magistrate of default having been committed sufficed to enable the Magistrate to issue warrants of commitment as for default of paying fines, in regard to all the persons included in such certificate; and if the persons arrested were required to be brought up before the Police Magistrate previous to their being sent to Prison, power being reserved to the Police Magistrate to discharge such of the persons arrested as were palpably unfit for work, other power being reserved to the Fiscal to discharge such as the Medical Officer of the Prison certified to be unfit for work. In either case, notice of discharge to be given to the Chairman; the limitation to two months of the time within which proceedings for default should be taken seems unreasonable, for, unless the Chairman is satisfied that there is good reason for the default, needless trouble would be given in seeking to arrest the defaulter, the time allowed is not sufficient to allow of due enquiry being made. The defaulter should always have the power to avoid arrest or to obtain release from arrest, or from Prison after arrest on tendering the money due by way of double-commutation and charges.

While the Chairman of the District Road Committee, Trincomalee, does not agree with the Commissioners in their recommendation F. as to the steps to be followed in the case of labour or commutation defaulters, he doubts if it possesses any advantages over the present system. It will, in his opinion, not do away with distress warrants; it will only shift the duty of issuing the warrants from the Chairman of the Road Committee to the Magistrate. It would be much simpler if the Chairman were to certify to the Police Magistrate that such and such persons had failed to labour or to commute, as the case may be, and then the Magistrate, on that certificate, should have power to issue at his discretion either a summons or warrant to the defaulter requiring him to show cause why he should not be punished. If no sufficient cause be shown on the appointed day, the labour and the commutation defaulter should be dealt with alike, and sentenced to 14 days' hard labour. A fine should not be imposed. It is an incongruous punishment. If the defaulter on appearing before the Court pays in the double-commutation rate and fine, he will be discharged. If a fine be imposed (unless the defaulter confess that he has no sufficient property) the Magistrate will have to issue a distress warrant.

NOTE.—Whatever procedure may be adopted, the difficulty which has arisen in attempting to deal with defaulters under the present system, which has been held to require a separate summons and, subsequently, a separate warrant for each defaulter—a requirement which, practically, has resulted in large numbers of defaulters getting off scot free owing to the inability of the staff of the Courts and the Committees to cope with the clerical work thereby entailed—should not be lost sight of.

G.—When such defaulter is brought up, unless he immediately pay the double-commutation due by him and a further sum not exceeding 50 cents, being cost of his arrest, he should be committed to the custody of the Fiscal to be sent before the nearest Police Magistrate together with the affidavit referred to in previous paragraph.

H.—The Police Magistrate should be required to accept such affidavit as *primâ facie* evidence against the defaulter, and should call upon the defaulter to show cause why he should not be sentenced to pay a fine of 10 rupees. It should be competent for the Magistrate to

The Chairmen of the North-Western, Southern, and North-Central Provinces raise no objections to recommendations G., H., and I. The Chairman, North-Western Province, suggests that the fines imposed in Court should be made payable to the Committee. The Chairman, Southern Province, suggests that a portion of the fine, equal to the commutation at a single-rate, should be paid to the Road Committee.

The Chairman, Eastern Province, objects to the affidavit.

The Chairman, Northern Province, does not concur with the Commissioners in their suggestions G., H., and I., as to course of procedure to be followed in dealing with Road Ordinance defaulters, and thinks that the course now followed after return of no property to writs of distress should, with some modifications, be continued—viz.: (1) That the Chairman of the District Committee shall send lists of defaulters to Magistrate of division in which defaulter resides. (2) Magistrate, on receipt of lists, shall summon defaulters to appear before him and show cause why they

Recommendations of the Commission.	Remarks.
H.—*continued.*	
hear such objection as may be made by the accused, and to allow any reasonable postponement which may be required, and to adjudicate thereon as if such matters were before him in his ordinary jurisdiction.	should not pay double the amount of commutation, or, in failure, be committed to jail for *three weeks.* (3) That if it be pleaded by any defaulter that he is either under or over age, the Magistrate shall send him before the Chairman of the District Committee, who shall make such enquiry as may be necessary, and either exempt the defaulter or send him back to the Court to be committed to jail if he fails to pay double the amount of commutation. (4) That in the event of a defaulter being ill when appearing before the Magistrate, the Magistrate shall, on being satisfied that such defaulter is really ill and incapable of work, and that no fraud has been attempted, release him on personal bail, and apply to the Chairman for exemption for the year. (5) That in the event of a cripple or person labouring from some physical infirmity being brought before the Magistrate claiming exemption on the ground that he is not able to labour under the Ordinance, the Magistrate shall send him with the Vidáne and Division Officer before the Chairman of the Road Committee, and the Chairman shall upon due enquiry exempt such person, if he be satisfied that no fraud has been attempted; but if on enquiry the Chairman be satisfied that there has been an attempt at fraud on the part of the Division Officer or Vidáne, or both, he shall send them with his notes of enquiry to the Magistrate, who shall have power to inflict such fine not exceeding Rs. 10 on the Vidáne or Division Officer, or both, as may seem to him sufficient. (6) That in the event of a defaulter disobeying the summons of the Court, and it be found necessary to issue warrant against him, he be called on to pay double the amount of commutation with an additional 25 cents, and in failure be committed to jail for one month instead of three weeks.
I.—In failure of sufficient cause being shown, and of the payment of the fine (if one has been inflicted) within such time as the Magistrate may fix, the defaulter should be committed to prison for one calendar month at hard labour. Notice of all proceedings should be given by the Magistrate to the Chairman of the Road Committee, and all such desirous shall be open to appeal by the accused person as well as by the Chairman of the Road Committee.	The Chairman, Central Province, prefers the procedure suggested under B. and E. Objects to that portion of I. which allows appeal from decisions of Magistrate, and suggests that if the persons arrested might, if a Kachchéri is within easy reach, be brought to the office of the District Road Committee before production before the Police Court, in order to exempt any persons entitled to exemption under clause 51 of the Ordinance.
K.—The Committee should have power to notice those liable to work as frequently as it chooses, before having recourse to the above steps, and to call out arrears of labour not utilized on minor roads within the year until 30th April of the subsequent year.	The Chairmen of the Road Committees of Galle, Hambantota, Jaffna, and Kandy are opposed to this recommendation. The other Chairmen raise no objection, but the Chairman, Eastern Province, who otherwise approves it, remarks that it appears to be opposed to the limitation of time for taking proceedings set forth in F. The Chairman, Southern Province, observes that the remarks under E. apply to this recommendation, and the calling out of labour not utilized within the year until 30th April of the subsequent year should be omitted. The Chairman, District Road Committee, Hambantota, is disinclined to adopt the recommendation of the Commissioners. In the first place, such an indulgence is quite unnecessary, for there is nothing to prevent the District Committees framing their estimates in such a manner as to provide for the exhaustion of all labour on their lists within the year, and the Provincial Road Committee, as auditors, should insist on the closing of all accounts by 30th November at the latest, at which date all persons who have been called out and have not laboured should be treated as defaulters, and dealt with as provided for in the other sections. The Chairman, Northern Province, does not agree in the suggestion contained in the latter part of the section. Observes that if labour is not called out in a year, it should not be called out in the next year; for, if called out in the following year, it would in fact render a man liable to double labour in one year because he was not required the previous year. That liability to labour under the Ordinance should cease on the 31st December, except in the case of defaulters. That accounts should, as much as possible, be closed at the end of every year.

The Chairman, Central Province, suggests that on failure to labour on notice, the penalty should at once be enforced; that no labour should be exacted after the close of the year, it being opposed to the true principle; that all taxes should be levied within the year for which they are due.

L.—There should be recorded in the Division Officer's lists the age of each male, and the year in which he became first liable.

The Chairman, Central Province, observes that the suggestion involves a heavy increase of clerical labour from year to year, and that no reasons are given in support of it.

The other Chairmen raise no objection.

M.—The District Road Committee should have power to grant authority in writing to any person to deal with claims to exemption. This will provide for the claims being attended to in the absence of the Chairman, who is now the only person who can act.

The Chairmen of the Central and North-Central Provinces are opposed to this recommendation; the other Chairmen approve it.

The power appears to be already exercised (with doubtful legality) in the Northern Province. As it is only proposed to make it permissive, there seems to be no valid objection to granting it.

N.—Provision should be made for the remuneration of Division Officers for labour supplied as well as money collected, and the percentage of remuneration should be at the same rate for both services.

Approved by the several Chairmen except by the Chairman of the North-Western Province and the Chairman of the District Road Committee, Ratnapura.

O.—The distance to which a labourer may be called out should be reduced to five miles from his residence, whether for principal or minor roads.

The Chairmen of the Kalutara and Puttalam Districts and of the Eastern, Central, and North-Central Provinces object to this proposal; the other Chairmen make no objection.

The Chairman, District Road Committee, Kalutara, observes that the distance for his district is too limited, as many villagers are not within 12 miles of a road. The Chairman, Provincial Road Committee, North-Western Province, approves the proposed reduction as reasonable, although it will affect the Public Works Department as regards principal roads, and although many persons may escape their liability to labour altogether in sparsely-populated districts, where the roads are few and far between. The Chairman, District Road Committee, Puttalam, remarks that if the proposed reduction is carried out, it will have the effect of emancipating a large number of villagers from the operation of the Ordinance, unless village paths are deemed to be included in the word "thoroughfare." The Chairman, Eastern Province, is not in favour of any reduction of the distances fixed in the Ordinance of 1861, as the adoption of the proposed reduction will, in effect, exempt many people in the Eastern Province from their liability under the Ordinance. The Chairman, Central Province, points out that clause 52 fixes 15 miles as the distance for work on principal roads, and 7 miles for work on minor roads; that the alteration suggested by the Commissioners would leave a large portion of the population free from contributing anything under the Ordinance, and would postpone to a serious extent the time when roads will reach their villages; that it will also very largely reduce the share contributed to principal roads.

The Chairman, North-Central Province, observes that the proposal would not answer in such a thinly-populated district as the North-Central Province; that the result would be that as many villages are more than five miles from any principal or minor road, the inhabitants of such villages could not be called out for labour, and might evade payment of the tax altogether in large numbers. That the present limit might be specially retained for the North-Central Province, provision being made that at least a week's notice should be given to the villagers to enable them to lay in a stock of food.

P.—All receipts granted for money or discharges for labour performed should bear adhesive stamps used in a manner similar to that followed in the Telegraph Department, viz.:—One-half on the portion issued, and the remaining half on the duplicate retained by

The Chairmen generally are opposed to this suggestion as unnecessary and as involving needless trouble, and consider that the use of books of receipts consecutively numbered, in foil and counterfoil, will answer all requirements.

Recomendations of the Commission.	Remarks.
P.—*continued.* the division or other issuing officer. Provision should be made for rendering unstamped discharges invalid, and before being issued for use, the year to which it applies should be marked on each stamp.	
Q.—The number of Division Officers should be increased either by the utilization of the local headmen or by the more extensive appointment of other qualified persons, with smaller districts than at present. Each District Road Committee should have power to sub-divide its district into divisions, giving one notice thereof, and without the necessity of any publication by Government in the *Gazette.*	The Chairmen concur in approving this suggestion.

The suggestion of the insertion of the proviso (clause 75) in the original Draft Ordinance of 1861 for the supply of a fixed quantity of road metal in lieu of labour due, as also the provision for offering a defaulter 12 days' labour to purge his default, subject to the penalty of re-arrest and punishment for bad or short work, is approved of by the several Road Committees, except by the Chairman, Provincial Road Committee, Southern Province, and the Chairman, Distrct Road Committee, Mátara, who consider it impracticable. The Chairman, Provincial Road Committee, North-Western Province, although agreeing in the first part of the suggestion, considers the latter portion impracticable. The Chairman, District Road Committee, Puttalam, has tried the system suggested, in the latter portion, but without success.

V.—1882.

FURTHER PAPERS

RELATING TO THE

COLOMBO HARBOUR WORKS.

(In continuation of Sessional Paper No. III. of 1882.)

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

COLOMBO HARBOUR WORKS.

No. 1.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Right Hon. the EARL of KIMBERLEY.

Miscellaneous.
No. 113.

Queen's House,
Colombo, 26th November, 1881.

MY LORD,—WITH reference to your Lordship's despatch No. 254, dated 4th August last,* and previous correspondence, on the subject of the Colombo Harbour Works, I have now the honour to enclose a copy of a Resolution which, after full discussion, was passed by the Legislative Council on the 16th instant.

2. By the first clause of this resolution the Council has formally adopted the proposal of Sir John Coode for the construction of the south arm of the Breakwater on design B., at a cost of £712,593.

3. The construction of this arm was provisionally sanctioned in your Lordship's despatch No. 254 of the 4th of August. The cost of it is in excess of the whole amount authorized† to be spent on the Breakwater by £62,593, and it will hereafter be necessary to pass an Ordinance to authorize the borrowing of this amount. But it is desirable to ascertain what further sum will be required for the completion of the works before legislating, in order that provision may be made for the whole amount by a single Ordinance.

4. The Council, it will be remembered, agreed by a resolution passed in 1879 to increase the expenditure on the works from £650,000, the limit fixed by the Ordinances, to £800,000, being an increase of £150,000. Of this increase the south arm now sanctioned will absorb £62,593, leaving only £87,407 available for a north arm. The estimated cost of the north arm designed by Sir John Coode is £198,046, being in excess of the amount available by £110,639.

5. There is a very strong feeling in the Council that the limit of £800,000 ought not to be exceeded, and certainly no effort should be wanting on the part of the Government to reduce the cost as much can be done without imperilling the safety of the works or omitting whatever is necessary for the security of the harbour.

6. I found in conversation with the Resident Engineer that under no circumstances would he be prepared to commence the construction of the north arm next year, and therefore no ultimate delay whatever is incurred by a reference to England to ask whether the cost of the north arm might not be reduced by substituting *pierres perdues* for the concrete blocks proposed in Sir John Coode's report of 16th June, 1880 (paragraph 22), in the construction of the inner portion of the north arm. The observations made by the Resident Engineer show (as stated in the ninth paragraph of the same report) that the ground swell or undulation of the sea which is prevalent during the north-east monsoon is only from two to five feet in height, and it is believed that this would be insufficient to affect this part of the north arm if built of *pierre perdues*. If this mode of construction can with safety be adopted, the cost of the work would probably be largely reduced, since it could be carried on by convict labour almost alone, under the direction of a small skilled staff. No doubt the outer end of the north arm at the entrance to the harbour and for about 300 feet inwards must be built with concrete blocks, as proposed by the Consulting Engineer, but it is as to the remaining 1,700 feet that the suggestion now submitted applies. I believe that Mr. Kyle, the Resident Engineer, is of opinion that if sufficiently massive stones be used, such a mode of construction would probably be found to answer every purpose, and it would certainly reduce the cost very materially. I would therefore ask your Lordship to cause the inquiry proposed in the enclosed resolution to be laid before Sir John Coode, and that he be asked to make his report at as early a date as he can conveniently do so.

7. In connection with this question, I forward for convenience of reference a copy of the report of the Chamber of Commerce which was laid before the Council as a Sessional Paper.‡

I have, &c.,
J. R. LONGDEN.

No. 2.

The Right Hon. the EARL of KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.
No. 99.

Downing Street,
21st March, 1882.

SIR,—I HAVE the honour to transmit to you for your information, in reply to your despatch No. 113 of 26th November last, the documents specified in the annexed schedule.

I have, &c.,
KIMBERLEY.

Date.	Description of Document.
9th January ...	Letter from Colonial Office to the Crown Agents.
11th March ...	Letter from Crown Agents to Colonial Office.
	Copy correspondence relative to the Colombo Harbour Works.

* Sessional Paper XV. of 1881. † Vide Ordinances No. 6 of 1875 and No. 1 of 1876. ‡ XXII. of 1881.

COLOMBO HARBOUR WORKS.

No. 1.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Right Hon. the EARL of KIMBERLEY.

Miscellaneous.
No. 113.

Queen's House,
Colombo, 26th November, 1881.

MY LORD,—WITH reference to your Lordship's despatch No. 254, dated 4th August last,* and previous correspondence, on the subject of the Colombo Harbour Works, I have now the honour to enclose a copy of a Resolution which, after full discussion, was passed by the Legislative Council on the 16th instant.

2. By the first clause of this resolution the Council has formally adopted the proposal of Sir John Coode for the construction of the south arm of the Breakwater on design B., at a cost of £712,593.

3. The construction of this arm was provisionally sanctioned in your Lordship's despatch No. 254 of the 4th of August. The cost of it is in excess of the whole amount authorized† to be spent on the Breakwater by £62,593, and it will hereafter be necessary to pass an Ordinance to authorize the borrowing of this amount. But it is desirable to ascertain what further sum will be required for the completion of the works before legislating, in order that provision may be made for the whole amount by a single Ordinance.

4. The Council, it will be remembered, agreed by a resolution passed in 1879 to increase the expenditure on the works from £650,000, the limit fixed by the Ordinances, to £800,000, being an increase of £150,000. Of this increase the south arm now sanctioned will absorb £62,593, leaving only £87,407 available for a north arm. The estimated cost of the north arm designed by Sir John Coode is £198,046, being in excess of the amount available by £110,639.

5. There is a very strong feeling in the Council that the limit of £800,000 ought not to be exceeded, and certainly no effort should be wanting on the part of the Government to reduce the cost as much can be done without imperilling the safety of the works or omitting whatever is necessary for the security of the harbour.

6. I found in conversation with the Resident Engineer that under no circumstances would he be prepared to commence the construction of the north arm next year, and therefore no ultimate delay whatever is incurred by a reference to England to ask whether the cost of the north arm might not be reduced by substituting *pierres perdues* for the concrete blocks proposed in Sir John Coode's report of 16th June, 1880 (paragraph 22), in the construction of the inner portion of the north arm. The observations made by the Resident Engineer show (as stated in the ninth paragraph of the same report) that the ground swell or undulation of the sea which is prevalent during the north-east monsoon is only from two to five feet in height, and it is believed that this would be insufficient to affect this part of the north arm if built of *pierre perdues*. If this mode of construction can with safety be adopted, the cost of the work would probably be largely reduced, since it could be carried on by convict labour almost alone, under the direction of a small skilled staff. No doubt the outer end of the north arm at the entrance to the harbour and for about 300 feet inwards must be built with concrete blocks, as proposed by the Consulting Engineer, but it is as to the remaining 1,700 feet that the suggestion now submitted applies. I believe that Mr. Kyle, the Resident Engineer, is of opinion that if sufficiently massive stones be used, such a mode of construction would probably be found to answer every purpose, and it would certainly reduce the cost very materially. I would therefore ask your Lordship to cause the inquiry proposed in the enclosed resolution to be laid before Sir John Coode, and that he be asked to make his report at as early a date as he can conveniently do so.

7. In connection with this question, I forward for convenience of reference a copy of the report of the Chamber of Commerce which was laid before the Council as a Sessional Paper.‡

I have, &c.,
J. R. LONGDEN.

No. 2.

The Right Hon. the EARL of KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.
No. 99.

Downing Street,
21st March, 1882.

SIR,—I HAVE the honour to transmit to you for your information, in reply to your despatch No. 113 of 26th November last, the documents specified in the annexed schedule.

I have, &c.,
KIMBERLEY.

Date.	Description of Document.
9th January ...	Letter from Colonial Office to the Crown Agents.
11th March ...	Letter from Crown Agents to Colonial Office.
	Copy correspondence relative to the Colombo Harbour Works.

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* Sessional Paper XV. of 1881. † Vide Ordinances No. 6 of 1875 and No. 1 of 1876. ‡ XXII. of 1881.

Enclosure No. 1 in No. 2.

The COLONIAL OFFICE to the CROWN AGENTS.

Downing Street,
9th January, 1882.

GENTLEMEN,—I AM directed by the Secretary of State for the Colonies to transmit to you for reference to Sir John Coode, the accompanying despatch from the Governor of Ceylon,* forwarding a copy of a resolution of the Legislative Council, in which the question is submitted for his consideration, whether any further reduction could be made in the present estimates for the construction of the Colombo Harbour Works, and especially whether a saving might be effected by using *pierres perdues* for part of the northern arm.

In another despatch Sir J. Longden has transmitted home a copy of a resolution prepared by an unofficial member of the Legislative Council, asking whether if the Consulting Engineer's final design for the harbour should be fully carried out, Her Majesty's Government would contribute the sum that may be required in excess of the original estimate of £800,000. To this despatch a reply has been addressed† stating that Her Majesty's Government would not feel justified in asking Parliament to make a contribution on account of this work. It is therefore of the utmost importance that the works, if completed on the scale proposed, should be carried out as economically as possible consistently with efficiency.

I am, &c.,
R. H. MEADE.

Enclosure No. 2 in No. 2.

The CROWN AGENTS to the COLONIAL OFFICE.

Downing Street,
London, 11th March, 1882.

SIR,—IN reply to your letter of the 9th January last, respecting the present estimates for the construction of the Colombo Harbour Works, I have the honour to transmit, for the information of the Earl of Kimberley, a copy of a letter from Sir John Coode on the subject.

The Governor's despatch No. 113 of the 26th November, and its enclosures, are herewith returned.

I have, &c.,
E. E. BLAKE.

Enclosure No. 3 in No. 2.

Sir JOHN COODE to the CROWN AGENTS.

5, Westminster Chambers,
17th March, 1882.

Colombo Harbour.

GENTLEMEN,—I DULY received your letter of 13th January, transmitting copy of a communication from the Colonial Office and of a despatch from the Governor of Ceylon* (with its enclosures) relative to the present estimates for the construction of the Colombo Harbour Works.

The question raised by His Excellency is whether the cost of the north arm might not be reduced by substituting *pierres perdues* for the concrete blocks in the inner portion of the north arm, it being assumed that if this mode of construction were adopted the cost of the work would probably be largely reduced.

As to this, I may remark that the question of the comparative cost of a work formed entirely *à pierres perdues*, and one with a base of rough rubble *à pierres perdues* and a capping of concrete blocks, was fully gone into before I proposed the latter mode of execution in June, 1880; in fact, it was the saving to be effected by this latter mode which induced me to recommend its adoption.

Although I entertain no doubt whatever as to the accuracy of my previous conclusion on this point, I have nevertheless again looked into the matter, and find that conclusion to be fully confirmed, viz., that the rubble base with a capping of concrete blocks, as recommended in my report of June, 1880, is the cheapest mode of construction that can be adopted in the case of the northern arm of the harbour.

I have, &c.,
JNO. COODE.

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* No. 1. † Sessional Paper No. III. of 1882.

VI.—1882.

DESPATCH

FROM

THE RIGHT HON. THE SECRETARY OF STATE

FORWARDING A

REPORT ON THE VALUATION OF SAMPLES OF CEARA RUBBER.

Ordered by His Excellency the Governor to be Printed

COLOMBO:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

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ENCLOSURE No. 2.—Mr. W. T. Thiselton Dyer, C.M.G., to Mr. S. W. Silver; dated 17th June, 1882 ... ... *ib.*

ENCLOSURE No. 3.—Mr. S. W. Silver to Mr. W. T. Thiselton Dyer, C.M.G.; dated 20th June, 1882 4

ENCLOSURE No. 4.—The Indian-rubber, Gutta-percha, and Telegraph Works Co., Limited, to Mr. W. T. Thiselton Dyer, C.M.G.; dated 29th June, 1882 *ib.*

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CEARA RUBBER.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.—No. 230. Downing Street, 8th July, 1882.

SIR,—I HAVE the honour to transmit to you for your information the document specified in the annexed schedule.

I have, &c.,
KIMBERLEY.

Date.	Description of Document.
30th June	... Copy of Letter from Kew Gardens respecting the Ceara-rubber plant.

Enclosures.

(1.) W. T. THISELTON DYER, Esq., C.M.G., to the COLONIAL OFFICE.

Royal Gardens, Kew, 30th June, 1882.

SIR,—I AM directed by Sir Joseph Hooker to inform you that Dr. Trimen, the Director of the Royal Botanic Garden, Pérádeniya, has brought with him to this country a sample of the caoutchouc of the Ceara-rubber tree (*Manihot Glaziovii*) of Ceylon production.

It will be in your recollection that this was introduced into Ceylon in 1877 as part of an undertaking initiated by the Government of India, and carried out from Kew at its expense for the purpose of introducing the most important caoutchouc-yielding plants of South America into the tropics of the Old World.

The Ceara-rubber plants went out to Ceylon in charge of Mr. Morris, the late Assistant Director of the Royal Botanic Garden, Pérádeniya.

This sample is the first of bulk sufficient for experimental purposes, which has been yielded by the trees at Pérádeniya. I am now to submit for your information copies of a correspondence with Messrs. S. W. Silver & Co. as to its commercial value.

I may remark that too great importance need not be attached to the difference between samples numbers 1 and 2, which is probably in great measure a mere accident. There seems no reason to doubt that the bulk of Ceara-rubber produced in Ceylon might be up to the standard of No. 1, the value of which Messrs. S. W. Silver & Co. estimate at from 2*s.* 9*d.* to 3*s.* per lb.

I may add that Dr. Trimen states that the Para-rubber plants (*Hevea*) seeded last year for the first time, and that the (*Castilloa*) was in flower when he left the Island. These circumstances are of the more interest as these species have proved difficult of propagation from cuttings in Ceylon.

I am, &c.,
W. T. THISELTON DYER,
Assistant Director.

(2.) W. T. THISELTON DYER, Esq., C.M.G., to S. W. SILVER, Esq.

Royal Gardens, Kew, 17th June, 1882.

DEAR SIR,—IT will be within your recollection that the plant (*Manihot Gaziovii*) which yields Ceara-rubber has been introduced into Ceylon at the expense of the Government of India.

It is now thoroughly naturalized there, and is likely to become practically a weed.

Dr. Trimen, the Director of the Royal Botanic Garden, Pérádeniya, arrived in England from Ceylon on the 15th. He brought with him the accompanying samples of rubber from the Ceara plant, the first which has been produced in the Island.

Sir Joseph Hooker would esteem it a favour if you could give him an estimate of the commercial value of the article as now sent you.

There are two samples, and you will observe that that labelled (2) is more glutinous and sticky than that labelled (1). A separate estimate of the value of each, supposing them to be sufficient for the purpose, would greatly oblige.

Sir Joseph Hooker ventures to trouble you in the matter, remembering the kind assistance which on other occasions you have rendered this Establishment. He also feels, that as an opinion on the results of the experiment will be anxiously anticipated in Ceylon, he cannot apply to a more authoritative source for an estimate which will be accepted with confidence.

I am, &c.,
W. T. THISELTON DYER.

(3.) S. W. SILVER, Esq., to W. T. THISELTON DYER, Esq., C.M.G.

Sun Court, 67 Cornhill, London, E.C.
20th June, 1882.

DEAR SIR,—YOUR communication of 17th instant, accompanied by specimens 1 and 2 of caoutchouc, known here as "Ceara," the produce of plants imported into Ceylon within the last few years, and brought to England by Dr. Trimen, the Director of the Botanic Garden, Pérádeniya, duly reached me.

In reply, I beg to say that the samples will be forwarded this day to the India-rubber, Gutta-percha, and Telegraph Works Company for examination, with a request that the results may be forwarded to you, including an estimate of value, in accordance with the desire of the Director-General.

Feeling sure that this will meet with your approval,

I am, &c.,
SL. WM. SILVER.

(4.) The INDIA-RUBBER, GUTTA-PERCHA, and TELEGRAPH WORKS Co., Limited, to W. T. THISELTON DYER, Esq., C.M.G., Assistant Director, Royal Gardens, Kew.

Silvertown, Essex, London, E.,
29th June, 1882.

SIR,—REFERRING to your letter of the 17th June to Mr. S. W. Silver, enclosing two samples of Ceara-rubber, we have now the honour to enclose you our Chemist's report on same after careful examination. The present market value of No. 1 sample is from 2*s.* 9*d.* to 3*s.* per lb. No. 2 sample we do not consider worth more than from 1*s.* to 1*s.* 3*d.* per lb.

We remain, &c.,
The India-rubber, Gutta-percha, and
Telegraph Works Co., Limited,
J. W. BAILEY.

(5.) REPORT of Examination of Two Samples of Rubber from S. W. SILVER, Esq., accompanying Letter from W. T. THISELTON DYER, Esq., C.M.G., Assistant Director, Royal Gardens, Kew.

Description, &c.

Sample No. 1 has a dry and compact appearance, is free from extraneous impurities, and from its tolerably uniform condition has been collected with care. It agrees in all respects with Ceara-rubber of good and sound quality.

Sample No. 2 is soft and sticky, and is mixed with a considerable quantity of coarse sand. It is much darker than No. 1. It is very desirable that a sample of No. 2, collected without this admixture of sand, should be examined.

Whether this sand is accidentally or intentionally mixed, its presence would be a serious drawback to its use. For the better class of rubber manufactures it would be totally unsuited.

In Manufacture, &c.

Sample No. 1, when washed and dried, gives a loss of 8 per cent.

This loss is much less than is met with in Ceara-rubber of the finest quality, and may probably be accounted for by the small bulk, and the facilities offered by time, mode of packing and transit, to the escape of the natural moisture of the product.

Water removes a considerable quantity of mucilaginous and fecculent matter and salts—the natural impurities of the rubber—and leaves it quite white and almost pure.

Alcohol extracts but a slight amount of resinous and oxidation products.

On incineration it yields 4·13 per cent. mineral ash, which agrees, in its chemical composition, very closely with the ash obtained from Ceara-rubber, the ash from which amounts to 4 or 5 per cent.

This sample (No. 1) vulcanizes perfectly when mixed with the suitable proportion of sulphur and heated.

Sample No. 2, when washed and dried, gives a loss of 62 (sixty-two) per cent. The sand renders it extremely difficult to wash, unless warm water is used, which increases its stickiness on drying.

Water removes much less mucilaginous matter than from No. 1.

Alcohol removes, even on long digestion, only a slight quantity of soluable matter. On digestion in alcohol it does not become harder or less sticky. This shows that its stickiness is not due to an oxidized state of the rubber, nor to the presence of resins, and would create an opinion that some other product has been added.

The chemical analysis of the mineral ash in such cases is of great assistance; the quantity of foreign mineral matter in sample No. 2 renders the analysis of the ash in the present case, quite unreliable.

It yields 27·53 per cent. ash before washing, and 6·42 per cent. ash when washed and dried. Sample No. 1, when washed and dried, yields 2·9 per cent. ash, insoluble salts contained in the juice of the plant.

When mixed with the suitable quantity of sulphur and heated, sample No. 2 vulcanizes, although not so satisfactorily as No. 1.

THOS. T. P. BRUCE WARREN,
Analytical Chemist to the India-rubber, Gutta-percha and Telegraph Company.

Silvertown, 29th June, 1882.

VII.—1882.

FURTHER PAPERS

RELATING TO THE

COLOMBO HARBOUR WORKS.

(In continuation of Sessional Paper No. V. of 1882.*)*

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

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COLOMBO HARBOUR WORKS.

No. 1.—LETTER from the RESIDENT ENGINEER to the Hon. the COLONIAL SECRETARY.

No. 100.

Colombo Harbour Works,
7th July, 1882.

SIR,—I HAVE the honour to draw your attention to the following facts regarding the anticipated progress with, and the final completion of, the S.W. Monsoon Arm during the incoming block-setting season, which will, in all probability, start in September next.

"Industry" and depositing rubble operations.—The "Industry" will, weather and casualties permitting, resume depositing of rubble in the mound of the Breakwater on or about the 1st day of August proximo, and as her share of the work is only about 20,000 tons, the whole will be completed by easy stages in three months, or (say) about the 1st November next.

Mahara Quarries.—The quarries at Mahara are in admirable condition for our present wants, but in the event of a North Arm being constructed, it will be necessary to make immediate preparations to meet the increased requirements of such.

No higher pressure than a daily out-put of 600 tons can be made, and even that out-put could not be maintained without a further extension on the west side, which will take not less than six months to complete. We require about 84,000 tons of rubble in all to complete the present S.W. Arm, which, if distributed equally over the whole season of (say) 200 days, will be equal to a daily out-put of not more than 400 tons as against 600.

North Arm.—My main object in addressing you on this subject is, first, to point out that the "Industry," in the first instance, will be idle to rubble work from and after the 1st day of November next; and second, also to inform you that the quarries will, as shown, be on two-thirds time during the next setting season. There are other points relating to preliminary works, plant, requirements, &c., which need not be enumerated, but which, if not taken up with the other now, will lead to probable loss of time in the event of an order for the construction of a North Arm.

I am, &c.,
JOHN KYLE,
Resident Engineer.

No. 2.—MINUTE BY THE HON. THE LIEUT.-GOVERNOR.

Colombo Breakwater.

IN view of the fact that the Southern Arm of the Colombo Breakwater, as shown in design B. of Sir John Coode's latest scheme, will probably be completed by the end of February next, one of the earliest questions for decision at the coming meeting of the Legislative Council will be that deferred from the last Session of Council,—in what manner this Breakwater is to be completed; it seems, therefore, advisable to take stock of our present position and to endeavour to bring to a definite issue the questions which still remain undecided.

Our present position.—To commence with the important question of ways and means, the Legislative Council has, upon the original estimates and designs for the Breakwater, sanctioned by Ordinance the raising of two loans—one of £250,000 from the Public Works Loan Commissioners, and one of £400,000 in the open market, in all £650,000; but as this amount proved inadequate to cover the cost of any satisfactory scheme among the alternative ones forwarded by Sir J. Coode in his report of 16th June, 1880, the Legislative Council, by a resolution taken during the Session of that year, enlarged the vote of credit to a total sum of £800,000, but decided that this sum should be the limit of expenditure which it would sanction on the Breakwater.

Sir J. Coode has estimated the cost of the Southern Arm, including the dredging and other subsidiary works now in progress, at £712,593.* But this estimate takes credit for two items, amounting together to £31,000, which may not, from an engineering point of view, be properly chargeable to the nett capital outlay on the Breakwater, but which will, nevertheless, have to be met out of the loan raised for Breakwater purposes. The items are:—

1st.—£15,000 for fifteen acres of reclamation ground. No doubt this reclamation might have been sold for even a higher figure, but as, without some such available space abutting directly on the harbour, the facilities for coaling at Colombo would have been totally inadequate, it has been thought advisable not to alienate this ground, but to reserve it for the erection of coal sheds and other such purposes directly connected with the working of the port, leasing it out at a rental which will about cover interest and sinking fund on the cost of filling it in.

2nd.—£16,000, the probable value on the termination of the works of the dredgers, barges, and other plant used in their construction. But the services of the dredger will be required for

* Sessional Paper XV. of 1881.

some years to come, not only as a protection against any possible silting up of portions of the harbour, but because there can be no question that experience gained in working the harbour will from time to time indicate the necessity of extending in one direction or another the area of deep water. This will have to be done—if it is to be done economically—by working the dredger for a continuous period of two or three months at the favourable season of the year, a portion of the cost of the operation being recouped by the sale of the sand ballast, which would thus become available, and the provision of which would otherwise become one of the difficulties of the future in working the port. The retention of the hopper-barge, of some of the flats, and of the steam-tug (a most useful little craft which should on no account be parted with) would also be a matter of necessity.

The total nett cost of the Southern Arm with its accessories cannot therefore be put at a less figure than £740,000, of which about £600,000 has been expended to date, in return for which the following progress has been made with the work:—The "root" has recently been completed, and the Master Attendant's boats and boatshed are about to be transferred to it in order to give more room in the Customs premises. The rubble foundation on which the Breakwater rests has been completed to the end of the Southern Arm as in design B., and the Arm itself was continued during last season to a total length of 3,370 feet. This leaves 830 feet only to be completed during the coming block-setting season. All but one acre of the reclamation has been filled in, the filling in of the remainder having been deferred in order to utilize this portion of the area as a hauling-up ground for the craft employed on the Breakwater. Half of the dredging has been completed; the balance, as designed by Sir J. Coode, will probably be finished by the middle of the year 1884.

Future Policy.—As Her Majesty's Government have declined to hold out any prospect of a grant-in-aid to the Breakwater from Imperial funds, and as Sir J. Coode has reported that no change of design, attended with the required efficiency, would result in any saving on the latest estimate for the cost of a Northern Arm 2,000 feet in length—viz., £198,000—the inevitable logic of pounds, shillings, and pence decides the question of the Northern Arm in the negative, unless the Colony is prepared to enlarge to the extent of £140,000 the limit which it has placed upon the expenditure on the Breakwater.

It may reasonably be presumed that the Council will not enlarge this limit, at any rate until full experience has been gained as to the working of the Southern Arm during the North-East monsoon, and whether any, and what, further protection is needed against the surface waves which set in from the North-West in December, January, and February, and which, though they in no way incommode the shipping, undoubtedly interfere with the landing and loading of cargo over a considerable area of the harbour. The question then remains—Shall this limit be reduced to £740,000, instead of £800,000? and, if not, for what purposes shall the balance of about £60,000 be applied?

I do not think that Captain Donnan's scheme of prolonging the Southern Arm in a North-Easterly direction should be adopted, for, upon consultation with Sir J. Coode, who takes the greatest interest and indeed pride in the work which is being carried on at Colombo under his auspices, I found that upon no point was he so strong as upon the importance of keeping the entrance to the harbour in the deep water of 41 feet, as in design B., instead of shutting up for all time the entrance at that depth and placing it in 38 feet only, as would be done by Captain Donnan's plan. Upon a point of this sort I am not prepared to go against the opinion of so high an authority as Sir J. Coode.

But if the North Arm is not to be gone on with for some time to come at any rate, then it appears to me to be of vital importance largely to increase the area of deep water in proximity to the Customs premises and reclamation ground, so as to admit of a second tier of vessels being brought within three hundred yards of the reclamation and within the area of greatest shelter during both monsoons. This would best be secured by dredging out a space within—*i. e.*, to the South and South-East of—the line of contour, as shown in design B.,* and bounded on the other two sides, towards the south by a line drawn from the seaward end of the root to within 400 feet of the Eastern end of the reclamation, and towards the East by a line drawn from that end of the reclamation due North until it reaches the present contour line of dredging. I cannot but think that by doing this we should secure all the shelter that will be required in the Colombo Harbour for some years to come; the cost of this extra dredging I am not of course in a position to estimate with any accuracy, but it would probably amount to some £40,000.† There can be no question that it would add enormously to the convenience and easy working of the port.

The balance could be spent very profitably on prolonging the reclamation towards Sea-street, and in placing a light on Dondra Head. This is urgently required in the interest of vessels making Ceylon from the Southward, having regard to the insufficient power of the existing light at Galle.

As soon as a decision is taken upon the points above raised, it will be necessary to extend by legislation the borrowing powers of the Government to the extent which may be decided upon after full consideration of the circumstances.

J. DOUGLAS.

15th July, 1882.

Enclosures.

Sessional Papers XXIII. of 1880, XV. of 1881, III. of 1882, and V. of 1882.

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* See plan enclosed in Sessional Paper XXIII. of 1880.

† I have arrived at this figure as follows:—Sir J. Coode's estimate of the cost of the dredging proposed by him, including cost of plant, is £79,000. The plant was estimated to cost about £30,000, nett cost £49,000, and the new area I refer to is smaller than that proposed to be dredged by Sir J. Coode.

VIII.—1882.

MATTAKKULIYA RAILWAY COMMISSION.

REPORT.

REPORT of the COMMISSIONERS appointed to "enquire into and report how the Mattakkuliya Traffic would best be served: whether by the construction of a Line of Railway to Mattakkuliya, or by the extension of the Mádampitiya road."

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

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LETTER FORWARDING COMMISSION.

Colonial Secretary's Office,
Colombo, 12th January, 1882.

GENTLEMEN,—I AM directed to transmit to you the enclosed Commission appointing you to enquire into and report how the Mattakkuliya traffic would best be served: whether by the construction of a line of railway to Mattakkuliya or by the extension of the Mádampitiya road.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

The Hon. W. H. RAVENSCROFT.
The Hon. W. W. MITCHELL.
J. R. MOSSE, Esq.
E. ROBINSON, Esq.
R. A. BOSANQUET, Esq.
C. E. H. SYMONS, Esq.

COMMISSION.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith.

By His Excellency Sir JAMES ROBERT LONGDEN, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief in and over the Island of Ceylon, with the Dependencies thereof.

J. R. LONGDEN.

To the Hon. WILLIAM HENRY RAVENSCROFT, Member of Our Executive and Legislative Councils; the Hon. WILLIAM WILSON MITCHELL, Member of Our Legislative Council; JAMES ROBERT MOSSE, Esquire, Director-General of Our Railway; EDWARD ROBINSON, Esquire, Finance and Traffic Manager of Our Railway; RICHARD ARTHUR BOSANQUET, Esquire; CHARLES EDWARD HOOD SYMONS, Esquire.

GREETING.

WHEREAS We have deemed it expedient that a Commission should issue to inquire into and report how the Mattakkuliya traffic would best be served: whether by the construction of a line of railway to Mattakkuliya or by the extension of the Mádampitiya road:

Now, Know Ye that We, reposing great trust and confidence in your prudence, ability, and fidelity, have nominated, constituted, and appointed, and by these presents do nominate, constitute, and appoint you, William Henry Ravenscroft, William Wilson Mitchell, James Robert Mosse, Edward Robinson, Richard Arthur Bosanquet, and Charles Edward Hood Symons, to be Our Commissioners for the purposes of the said inquiry.

And We do hereby authorize and empower you, Our said Commissioners, to make all necessary inquiries into the said matters, and to report how the traffic would best be served, and to submit estimate of cost of construction of a line of railway and estimate of traffic.

And We do hereby further authorize and empower you, Our said Commissioners, to exercise, for the purpose of carrying on the said inquiry, the powers given to Commissioners appointed by Us under the provisions of the Ordinance No. 9 of 1872, entitled "An Ordinance to empower Commissioners appointed by the Governor to inquire into any matter referred to them for enquiry, to hear evidence thereon."

And We do hereby command and require you, Our said Commissioners, to report to Us under your hands within three months upon the matters referred to you as aforesaid.

GIVEN at Kandy, this Eleventh day of January, in the year of our Lord One thousand Eight hundred and Eighty-two.

By His Excellency's command,
W. H. RAVENSCROFT,
Acting Colonial Secretary.

MATTAKKULIYA RAILWAY COMMISSION.

REPORT.

THE Commissioners appointed by His Excellency the Governor to enquire and report as to how the Mattakkuliya traffic can best be served—whether by a line of railway to Mattakkuliya or by the extension of the Mádampitiya road—have, after a careful consideration of the subject, arrived at the unanimous opinion that a railway would undoubtedly serve the Mattakkuliya traffic better than would the extension of the Mádampitiya road.

For a line of railway to Layard's Broadway, four separate traces have been prepared, and have been submitted for the consideration of the Commissioners, viz.:—

1st.—That from Maradána Junction, by Mr. Stoddart, and coloured red on the plan attached hereto.

2nd. That from the Pettah station, by Mr. Strong, and coloured green on plan.

3rd.—That from west of Pettah station, by Mr. Symonds, and coloured blue on plan.

4th.—That from near the Fort station, by Mr. Symonds, and coloured yellow on plan.

For a line from Layard's Broadway to Mattakkuliya, two traces have been submitted, viz.:—

1st—That by Mr. Stoddart, coloured red on plan.

2nd.—That by Mr. Strong, coloured black on plan.

The Commissioners, by examination of persons interested in the construction of a line of railway from Colombo to Mattakkuliya, and of those generally competent to give valuable and reliable evidence on the subject, and on the relative merits of the various traces that have been proposed and submitted, and by personal examination of the ground over which the same are carried, and of the neighbourhood bordering thereon, have, after a due and careful consideration of all the facts of the case, arrived at the following conclusion, viz., that the best route for a railway from Colombo to Mattakkuliya, and that most likely to benefit—as far as this may be done without sacrificing one to the other—both the goods and passenger traffic, is, for the portion from Colombo to Layard's Broadway, that proposed by Mr. Strong and coloured green on the plan, which, starting from near the present Pettah station, passes across Dam-street and by a tunnel under Wolfendahl-street to Layard's Broadway. From this point the Commissioners are of opinion that the line should follow Mr. Stoddart's trace, coloured red on plan, to the inlet from the river at Mattakkuliya farm.

The trace proposed by Mr. Strong, coloured black on plan, from Layard's Broadway, and passing by Grandpass to Mattakkuliya, and referred to in his letter of the 16th March, 1882 (vide appendix R.), has much to recommend it if the interests of passengers alone be considered, but it provides to a very limited extent for any goods traffic.

The Commissioners are of opinion that the only route—viz., that above mentioned as Mr. Stoddart's trace (red on plan)—that will secure the traffic to and from the mills, although it will secure a certain amount of passenger traffic, is not the best for passenger traffic, and that although the district through which it runs is thickly settled, the population is insufficient to warrant the number of trains which alone could render a suburban railway profitable; and the Commissioners regret that at present they see no probability of such an increase in the population as would materially augment the passenger traffic, and it appears to the Commissioners to be evident that it is impossible to obtain a route equally well situated for passenger and goods traffic. For the latter, Mr. Stoddart's trace from Layard's Broadway to Mattakkuliya is undoubtedly the best; whereas, for passenger traffic, a line between the Mutwal and Alutmáwata roads would seem to offer the best guarantee of good results. The ground in this locality is not however very favourable for a railway, and, irrespective of this consideration, it is so thickly studded with houses, that the cost for compensation for lands, &c., would necessarily be extremely heavy.

It has been stated by mill-owners that if a railway be constructed, and if sidings be made to their respective mills, they will use the line for conveyance of goods to and from their mills; but it seems evident that, unless it were made possible for goods to be put directly into the railway trucks at the mills, carts—and not the railway—would be used in many cases. To some extent this would depend on the railway rates, but, taking the rates named by the Traffic Manager, which approximate to those the mill-owners are willing to pay, it appears probable that the railway would be used only if every possible convenience in the matter of sidings and supply of trucks were ensured.

The estimated cost of the line (1st) from Pettah station to Layard's Broadway (Mr. Strong's trace, coloured green on plan), (2nd) from Layard's Broadway to Mattakkuliya (Mr. Stoddart's trace, coloured red on plan), is as follows:—

	Rs.	Rs.
Works and rolling stock from Pettah to Green Lodge—vide Sessional Paper XXXV. of 1878, page 14 ...	—	296,563
Land.—Pettah to Mattakuliya, vide assessment list by Messrs. Stoddart, Ledward and Gunatilleke, forwarded with Government Agent's letter to the Colonial Secretary, No. 551 dated May 1st [3rd], 1880—(See note A.) .	91,830	
Compensation for land over tunnel under Wolfendahl-street—vide appendix P. (see note B.)	115,250	
		207,080
Telegraph, four miles	—	3,000
Way and works and rolling stock, Green Lodge to Mattakkuliya—(See appendix E. Also note C.) ...	—	364,418
		871,061
Add contingencies (@ 10 per cent.	—	87,106
	Total... Rs.	958,167

NOTE A.—This is the estimated sum for compensation, but from previous experience the Commissioners fear that this sum will be considerably exceeded.

NOTE B.—The Commissioners are of opinion that it may reasonably be expected that a large portion of this sum will be recouped by the sale of land and property situated over the tunnel.

NOTE C.—Rs. 341,628—Vide Mr Stoddart's estimate for 2nd section (see appendix E.)
Less 2,210—For Telegraph, which is already included in the sum of Rs. 3,000.

339,418
Add 25,000—Difference between rolling stock already estimated for by Mr. Strong for 1st section and total of rolling stock as estimated by Mr. Stoddart—vide appendix E.
Rs. 364,418

The Traffic Manager's estimate of receipts and working expenses is as follows (vide appendix Q.):—

	Rs.
Goods receipts	17,037
Passenger receipts	40,000
	57,037
Less working expenses ...	34,750
Net receipts . . Rs	22,287

This amount (Rs. 22,287) would pay 2·33 per cent. on an expenditure of Rs. 958,167, and even supposing that the receipts are increased on the cost of the railway diminished, it appears improbable that the return will yield 3 per cent. on the capital expended; and in view of the cost of funds to be borrowed, say at 4 per cent., plus 1 per cent. for a sinking fund, the Commissioners are unable to report in favour of the undertaking, commercially, more especially in the present depressed condition of the chief industries of the Colony.

In conclusion, the Commissioners would mention that it has been brought to their notice that in 1873 the Legislative Council passed an Ordinance to facilitate the construction and to regulate the working of tramways in Ceylon, and they have been informed that certain steps in the direction of practically applying the provisions of this Ordinance were taken, but that for some reasons, deemed to be sufficient at the time, no practical results followed. It has further been brought to the notice of the Commissioners that within the past few months the question of the provision of tramways for Colombo has again been before the public, and they would wish to express an opinion, founded on the experience gained by them in the prosecution of the enquiries regarding the proposed Mattakkuliya railway, that as regards the provisions of accommodation for passenger traffic, tramways would seem to have great advantages over a railway for the town of Colombo.

W. H. RAVENSCROFT, Chairman.
W. W. MITCHELL.
J. R. MOSSE.
RICHD. A. BOSANQUET.
C. E. H. SYMONS.

Colombo, 24th June, 1882.

[Mr. Robinson, the Traffic Manager, being absent on leave, has not signed the Report.]

MATTAKKULIYA RAILWAY COMMISSION.

PROCEEDINGS.

Colombo, 17th January, 1882.

PRESENT:

The Hon. W. H. RAVENSCROFT, Chairman.

The Hon. W. W. MITCHELL.
J. R. MOSSE, Esq.
E. ROBINSON, Esq.
R. A. BOSANQUET, Esq
C. E. H. SYMONS, Esq.

THE Chairman read the Commission. Arranged for evidence to be taken from merchants and others using the line.

Examination of the Hon. J. Stoddart, Acting Surveyor-General.

Mr. Stoddart attended and explained his estimate, for which see page 4 of Sessional Paper XXXV. of 1878.

Resolved that Mr. Stoddart be asked to give his estimate in two sections, viz., (1) from Maradána junction to where the other proposed lines intersect his, and (2) from that point to Mattakkuliya; vide letter sent in accordance with above resolution. (Appendix A.*)

Resolved that the following mill-owners and merchants be asked if they would use a railway, if constructed for carriage of coffee from main line to stores, manures, &c., to main line, and coffee, oil, &c., from mills to wharf; and to state the probable tonnage to and from the mills, and the present prices paid for cartage:—Messrs. Armitage Brothers, Stevenson & Sons, Courthope, Bosanquet & Co., Whittal & Co., (MacGregor & Co.), Wm Law & Co., Volkart Brothers; vide letter. Appendix(B.*)

Resolved that Mr. Daniel, Superintendent of Minor roads, Colombo, be asked to give and get all information he can from Negombo boatmen, salt-dealers, fruit and cocoanut dealers &c., as to use of line—vide letter sent in accordance with this resolution. (Appendix C.*)

Resolved that the Resident Engineer of the Railway be requested to furnish an estimate of cost of construction of a line of railway from Green Lodge to Mattakkuliya by the trace proposed by him in the neighbourhood of Grandpass—vide letter sent accordingly. (Appendix D.*)

The Commissioners adjourn to the 24th instant.

Colombo, 24th January, 1882.

The Hon. W. H. RAVENSCROFT, Chairman.

J. R. MOSSE, Esq.
E. ROBINSON, Esq.
R. A. BOSANQUET, Esq.
C. E. H. SYMONS, Esq.

READ letter from Surveyor-General dated 24th January, 1882, (vide appendix E.) in réply to the letter from the Commission dated 17th January, 1882.

Read letter from Mr. Strong, Ceylon Government Railway, dated 19th January, (vide appendix F.*) in reply to a letter from the Commission dated 17th January, 1882.

Mr. W. C. Leechman states:—

We should prefer to use the railway, if the convenience of it enabled us to do so—*i.e.*, if we had a siding into our mills at Hulftsdorp, and if there was a certainty of trucks being in our mills the night before shipment, or first thing on the morning of shipment.

The only trace that would serve our mills, as at present laid out, is that of Mr Stoddart's, running from Maradána junction through Paradise to Green Lodge.

The distance from the nearest point of that trace to our mills is about 300 or 400 yards.

But although a siding would be more convenient, yet, without a siding, if a station were at Paradise, we should make use of it, both for convenience and economy.

We should use the line for transport of coffee, &c., to and from the main line and to and from the wharf; but for emergency purposes we should, I think, have to keep a small cart establishment, unless we could depend upon getting as many trucks as we required, and at any hour we pleased.

The rate per ton by cart from our store to the terminus is 50 cents.
Do. do. to the wharf is 75 cents.

For the amount of tonnage we send up and down see Sessional Papers XXXV. of 1878, page 7, which is approximately correct, and which gives 18,500 tons between mills and wharf, 6,000 tons between main line and mills—total, 24,500 tons.

Would you use the railway for carriage of copperah, or any other goods from Mattakkuliya to your mills?

The boats containing copperah for our mills bring the copperah by canal to us, and it is doubtful if there would be any change.

Mr. Alexander Stevenson states:—

Cart hire to wharf, Rs. 1 per ton; cart hire to and from rail, Rs. 1 per cart of 75 bushels.

[NOTE.—This, the Traffic Manager remarks, is 80 cents per ton, taking coffee at 37 lb. per bushel—the average weight per bushel as taken by the Traffic Manager.]

I would save a railway clerk if goods were conveyed through to my mills; it is most necessary to have a man at the railway when goods are arriving, and as I have not sufficient business to employ a man exclusively for railway work, I use him both as a wharf and railway clerk.

Mr. Stevenson hands in a letter, which is read and considered by the Commissioners. (Appendix G.*)

Mr. R. A. Bosanquet states:—

We should certainly use the railway to and from the main line and to and from the wharf, except in cases of emergency, when we might have to use carts; but the cases of emergency are few and far between; probably not to the extent of fifty or even twenty tons in the year.

* Not printed.

Rate from our mills to wharf is 87½ cents per ton.
Do. to and from railway is Rs. 1·25 per ton, including agency.
Do. to railway 75 cents per ton.

And we would be prepared to pay the same rates to the railway.

Mr. C. C. Armitage states :—

With proper siding accommodation we should certainly use the railway in preference to carts, both to and from the railway and to and from the wharf.

We pay a rupee per ton for carriage to and from the railway, and to and from the wharf, and we should be prepared to pay the same rate to the railway.

We should seldom require trucks for more than fifty tons in any one day, and we would give notice to the Traffic Manager by 4 o'clock the evening before shipment is made.

The above refers only to our Mattakkuliya mills.

Resolved that merchants and mill-owners be asked for traffic returns for the year 1881, in accordance with a form drawn up by the Commissioners.

9th March, 1882.

PRESENT :

The Hon. W. H. RAVENSCROFT, Chairman.

The Hon. W. W. MITCHELL. | E. ROBINSON, Esq.
J. R. MOSSE, Esq. | C. E. H. SYMONS, Esq.

The Hon. F. R. Saunders being requested to give his opinion on the subject of a line of railway to Mattakkuliya, states :—In July, 1878, the Municipal Council of Colombo adopted a report drawn up by the Public Works Committee of the Municipal Council to the following effect :—

"With reference to the Traffic Manager's report and estimate of traffic of the proposed railway to Mattakkuliya (received with the Hon. the Colonial Secretary's letter No. 41 of 29th June, 1878), the Committee observe that no estimates have been made for salt or other goods in addition to the traffic returns from the several mills, and the coaching receipts are, in the opinion of the Committee, estimated exceedingly low, for they see no reason why the coaching receipts on the proposed line should not be quite as high as on the Pánaduré branch line."

In December, 1878, the following resolutions were adopted by the Municipal Council :—

"That the Council recommend to Government the adoption of the line, coloured green on the plan, from the Pettah to Layard's Broadway, and that the question of the value of the land that would be required to be taken up for the purpose be left to Government.

"That the line coloured green (above referred to) be continued to Mattakkuliya along the line coloured red on the plan, the Council having already expressed an opinion that the trace in question is the best that can be adopted."

The line recommended by these resolutions is that on the plan attached to the proceedings—coloured green for line to Green Lodge, and red from there to Mattakkuliya—and I am of opinion that this line is the most to be preferred of any of the traces that have been laid before me. I don't know but that a better trace could not be made along the more populous parts of Mutwal and Kochchikada, but that is a matter for Engineers.

I consider the proposed line will serve the interests of the town better than any other, but should it not be made I think that a line from this side of the Kelaniya bridge through Bridge-of-Boats to Mattakkuliya would serve the Mattakkuliya and Negombo traffic.

I am of opinion that in Mr. Robinson's report the estimate of goods traffic is much under what it will really turn out to be. For instance, salt and dry fish from Negombo would be taken direct to the railway instead of being taken by boat to Bridge-of-Boats and from thence by cart to railway.

I have consulted several merchants who have expressed their willingness to use the railway.

I do not think there can be any comparison between continuing the road and making a railway. One is a very small matter, and the railway has a great many advantages over the road. It must depend on what traffic is to be carried, passenger or goods ; if only passenger, I am not sure but that a tramway would not serve the purpose quite as well as a railway. I would suggest that the population of the several Municipal districts should be called for.*

Mr. Daniel states :—

I have the traffic returns for one week last year from the 14th to 21st May, taken on two points of the Mádampitiya road, and also traffic for three days, viz., from 6th to 8th March, which I beg to hand in. I also hand in a traffic return for five days on the Hendala canal from 2nd to 6th inclusive. †

The salt and dry fish is divided pretty evenly between Grandpass and Mutwal. From all I can learn, the salt and dry fish for up-country would be loaded direct, if there was the opportunity. There are no salt stores, as far as I can find out, in Colombo.

A cartload of salt costs from Grandpass to railway about Rs. 2·25 ; this includes all costs, viz., Rs. 1·50 for cart hire, 18 cts. private toll on cart, 25 cts. unloading from boats, weighing and packing, 12½ cts. loading into carts, 12½ cts. unloading from carts, and loading at trucks at railway. There is also a charge of Rs. 1 for every boat coming into a private landing place.

Yesterday, when making enquiries at the Bridge-of-Boats, I found a Moorman loading salt direct for the railway, and he informed me that he had engaged 12 trucks for that day for salt alone.

[*Mr. Robinson*, C. G. R., here states that he thinks the railway charge for goods from main line to Mattakkuliya would be about 67 cents, and 12½ cents for loading—say in all 80 cents. In January, 1880, the traffic on the railway in the item of salt was 357 tons, and of dry fish 75 tons.]

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* See appendix T. † Appendices I., K., L.

There is a very small quantity of salt and fish from intermediate stations. Mahara is the only station from which full truckloads are despatched, that but seldom. [This is corroborated by the Traffic Manager.] I consider that Mr. Stoddart's trace (red line on plan) will sufficiently serve all interests as far as passenger traffic is concerned.

I do not think the traffic from the mills to the wharf will go by rail, for the reason that mills have their own cattle establishments ; but I have made no enquiries on this subject. From all I can understand, Mr. Stoddart's trace would also serve the goods traffic I do not think the extension of the Mádampiṭiya road would serve the traffic of the district, but it would be very useful as then there would be a level road from Mattakkuliya to Colombo.

Mr. *Symons* (as representing the Owners of Upland Mills) states :—

Traffic for rail, 6 miles ... 4,500 tons.
Mills to wharf ... 4,500 „

Cost of cart hire both to wharf and railway 75 cents per ton, cooly hire 25 cents ; total Rs. 1.

We would use the railway if there be equal facilities given, and a siding into the mills, and prices not dearer than at present. We would gladly get rid of our cart establishment if possible, as it is a most expensive and troublesome addition to a curing establishment, and during the slack time does not earn sufficient to pay for the upkeep.

Adjourned to 3 P.M. Monday, 13th March, 1882.

13th March, 1882.

PRESENT :

The Hon. W. H. RAVENSCROFT, Chairman.

J. R. MOSSE, Esq. | E. ROBINSON, Esq.

THE Chairman laid before the Commission statements of traffic for 1881, received in respect of the following mills:—Blomendahl, Uplands, Cotanchina, and Hulftsdorp—in compliance with the resolution of the Commissioners passed on the 24th January. (See appendix M.)

Mr. *Strong*, Resident Engineer, examined, states :—That his estimate (Rs. 297,563) of cost of construction of line from Pettah station to Layard's Broadway, exclusive of compensation for land as given in Sessional Paper XXXV. of 1878, is, in his opinion, a fair estimate for the present time.

On what grounds do you consider that a line taken from Green Lodge to Muttakkuliya, running parallel to the Grandpass road, and thence branching off to Mattakkuliya at the Cemetery road, is preferable to any other ?—Because I am of opinion that a much greater amount of passenger traffic would be commanded, and that it will obtain all the goods traffic from Mattakkuliya, and I consider that the passenger traffic on this line would exceed the passenger traffic and the goods traffic from the mills that would be obtainable on the other line.

Do you consider that goods traffic between Blomendahl and Upland mills and the wharf would be attracted to railway on Mr. Stoddart's trace ?—I do not think it would.

Why do you hold that opinion ?—Because at home for such short distances railways are never used.

Do you adhere to your previously expressed opinion that a railway to Mattakkuliya should be considered only as a passenger line ?—Yes, I do; but I consider that if a line stopping short of Bridge-of-Boats were constructed, it would pay better than one continued on to Mattakkuliya, though probably it would not afford all the same convenience to the public.

The *Traffic Manager* hands in a return showing quantity of salt and dry fish forwarded from Colombo station to all stations in the year 1880 (Vide appendix N.)

Mr. *Daniel* produces a statement showing the traffic on the three following roads for three days, taken between the hours of 6 A.M. and 6 P.M. (vide appendix O.):—

Mutwal road : Colombo side of Elie lane ;
Alutmáwata road: Junction with Quarry road ;
New Mádampiṭiya road : Near Blomendahl mills ;
Grandpass : Colombo side of Cemetery road.

And states that he can say with certainty that no salt intended for up-country is taken into Colombo stores, but that it is carted direct from Grandpass and Mutwal to the railway station.

To Mr Daniel : Are there any local circumstances on any of the roads mentioned in the return to affect the traffic ?—On the Grandpass road many of the people are those going and returning to and from the Pettah markets. On the other roads I know of no local circumstances that would affect the traffic.

Do you consider that any large proportion of the passengers counted are of a class that are likely to use a railway, if available ?—Certainly, all those who now use carriages and hackeries, and a considerable per-centage of the foot-passengers, would use the railway.

Which trace do you consider would attract the largest amount of passenger traffic ?—In my opinion Mr. Stoddart's trace would attract the most passenger traffic, and I believe that this trace would sufficiently serve the Mutwal and Alutmáwata road passenger traffic, though by taking the line from Upland mills in a more direct line nearer to the Alutmáwata road some advantage might be attained.

Mr. Daniel states that the inlet at Mattakkuliya farm is a most suitable place for boats to discharge. The entrance would require to be widened; the depth, he believes, to be always sufficient for a loaded pada-boat. Floods would not affect discharge of cargo at that point from boats.

Gravets Mudaliyar *A. Goonatilleke* states :—

The dry fish and salt arriving by Negombo canal is taken direct from Bridge-of-Boats to railway station by carts—none goes by canal to railway, and although the cost by canal appears to be only one-half of the cost by carts from Bridge-of-Boats, the difficulties of navigation and the great delay, &c., render the cartage from Bridge-of-Boats to railway station preferable. Sometimes salt and dry fish is taken from Mutwal ferry to railway station by carts. The charge from Bridge-of-Boats to railway station is Rs. 1·50*

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* The charge, about 25 cents, for unloading from boats, packing and weighing at Grandpass, is omitted.

for cart hire ; 21 cents fee to owner of land; 12½ cents per cart of 25 bags, and 12½ cents per cart at railway—loading and unloading.

Mr. *E. Robinson*, Traffic Manager, states :—

Paragraph 3 of No. 1 of Sessional Paper XXV. fully explains the data on which I estimated the goods traffic at 8,000 tons. My estimate does not include any of the salt or dry fish that goes from Colombo to up-country stations. I am still of opinion that the railway would not carry the goods traffic between the mills and the wharf.

Adjourned to the 14th March.

14th March, 1882.

PRESENT :

The Hon. W. H. RAVENSCROFT, Chairman.

The Hon. W. W. MITCHELL. | E. ROBINSON, Esq.
J. R. MOSSE, Esq. | C. E. H. SYMONS, Esq.

1st Resolution.

Resolved, that in the opinion of the Commissioners the line laid out by Mr. Strong from Pettah station to Layard's Broadway (Green Lodge) coloured green on plan, and continuing thence by Mr. Stoddart's trace to Mattakkuliya (coloured red on plan), the line from Champagne Villa to Mattakkuliya Farm being taken by a curve near to Kelani mills with a siding into Mattakkuliya mills, is the best route for a railway to connect Mattakkuliya with the Main Line.

2nd Resolution.

Resolved, that the Traffic Manager be requested to prepare and submit an estimate of traffic returns based on the statement of traffic before the Commission, including that between the mills and the wharf and the railway, and the traffic in salt and dry-fish from Mattakkuliya, as well as passenger traffic along the whole line.

16th June, 1882.

PRESENT :

The Hon. W. H. RAVENSCROFT, Chairman.

The Hon. W. W. MITCHELL. | J. R. MOSSE, Esq.

C. E. H. SYMONS, Esq.

The following papers are laid on the table by the Chairman :—

1. Appraisement by A. Goonetilleke, Vidána Mudaliyár, of properties under which the trace for a railway tunnel passes. (Appendix P.)
2. Estimate by the Traffic Manager of receipts and working expenses of the proposed railway to Mattakkuliya. (Appendix Q.)
3. Letter dated 16th March, 1882, from the Resident Engineer of the Railway to the Chairman, Mattakkuliya Railway Commission, regarding Mr. Strong's trace. (Appendix R.)
4. Petition from certain persons against the construction of a railway to Mattakkuliya. (Appendix S.)
5. Return of population of the various wards of the Municipality and the out-lying villages in the neighbourhood of Colombo, according to the Census of 1881. (Appendix T.)

The above having been read and considered by the Commissioners are numbered respectively and attached to the proceedings

The Commissioners considered their Report and adjourned to 1 P.M. on the 17th.

17th June, 1882.

PRESENT :

The Hon. W. H. RAVENSCROFT, Chairman.

The Hon. W. W. MITCHELL. | R. A. BOSANQUET, Esq.
J. R. MOSSE, Esq. | C. E. H. SYMONS, Esq.

Considered and drew up a Report for submission.
Commission closed.

APPENDICES.

[A., B., C., and D. not printed.]

E.

LETTER from the Hon. the Acting SURVEYOR-GENERAL to the CHAIRMAN, Mattakkuliya Railway Commission.

Surveyor-General's Office,
Colombo, 24th January, 1882.

SIR,—WITH reference to your letter of 17th instant, requesting me to furnish an estimate of my trace from Maradána Junction to Mattakkuliya in two sections, I have the honour to point out that considerable alterations have been made in its condition since my estimate was framed six years ago.

In the first place, the Maradána Junction station and points of the Kalutara line have been placed over, and extend beyond, the point I started from near the bridge on the main line, which would necessitate a revised trace for some distance at the commencement through less favourable ground.

Second, the site I selected for my first station is between Grandpass and Layard's Broadway, exactly one mile from the Junction, whereas the station at Green Lodge would be 200 yards further on and less central; I should therefore like to have a station at the 50th chain between the canal bridge and Paradise, adjoining Skinner's road at the junction of the new road down from the Law Courts, which are only three-eighths of a mile distant, and will therefore take the liberty of adding the estimated cost of this proposed station to my first section.

Third, the new Mádampitiya road has been made over my railway trace for fully half a mile, for the diversion of which Mr. Cantrell, when Acting Resident Engineer, allowed the sum of Rs. 10,560 in his estimate of the cost of the line from Green Lodge to Mattakkuliya. (Vide Sessional Paper XXV. of 1880.) As this road deviation, however, could nearly all be obviated by an alteration of my trace at a little extra expense, I will omit its consideration in this sectional estimate.

Assuming, under these altered conditions, that the line would be about the same length as formerly, by starting from the junction of the Kalutara and main lines, it will be 90 chains, or one mile and one-eighth, from the points to Green Lodge, the cost of which I estimate as follows :—

Estimated cost of First Section, Maradána to Green Lodge, a distance of 1⅛ mile.

	Rs.	Rs.
Earthwork	46,298	
Bridge over canal	4,000	
Waterways	2,800	
Level crossings, gates, &c.	3,000	
Fencing	3,960	
Permanent way	26,246	
Telegraph	790	
Permanent station near Paradise	12,000	
Engineering and contingencies, at 12 per cent.	11,891	
		110,985
To which add cost of land and buildings to be taken up ...		23,000
Total cost of first section, exclusive of rolling stock and cost of a station at Green Lodge, which will be provided for in the second section	Rs.	133,985

Estimated cost of Second Section, Green Lodge to Mattakkuliya, 3⅛ miles.

	Rs.	Rs.
Earthwork	66,502	
Waterways	6,828	
Road diversion	3,000	
Level crossings, gates, and signal-houses	6,200	
Fencing	10,880	
Permanent way	72,907	
Stations, including goods-sheds and sidings	72,302	
Telegraphs	2,210	
Engineering and contingencies, at 12 per cent.	28,899	
Land	71,900	
Estimated cost of second section, exclusive of rolling stock ...	Rs. 341,628	
First section		133,985
Second section		341,628
To which add rolling stock, as provided for the 3½ miles (Vide Sessional Paper XXV. of 1880)		61,839
Total estimated cost of whole line, 4¼ miles		Rs. 537,452

You will observe that my revised estimate for the whole line, exclusive of rolling stock, is Rs. 475,613, against Rs. 471,354 in 1876. In arriving at this amount, I have reduced the estimate for Engineering and contingencies by Rs. 4,571, as there was a clerical mistake in my former estimate under this head, which made it too high, and I have added the cost of a permanent station near Paradise, Rs. 12,000.

I may here remind the Commission that when I staked out this line in the latter end of 1875 (and it was actually staked out and properly surveyed) the question of relieving the traffic on the streets was considered of paramount importance, as there were frequently blocks near the railway station and wharf for days during the busy coffee season.

There is nothing of the kind now, and it is a matter for consideration whether it is likely to occur again should seasons, coffee, and other produce so far improve that, when combined with railway extension, a corresponding increase of traffic will accrue to the main line. If goods traffic is to be left out on the Mattakkuliya Branch, then my estimate for stations and sidings can be materially reduced.

With regard to the alternative trace from Pettah station to Green Lodge, recommended by the Chief Resident Engineer in his letter No. 281 of 26th October, 1878, and approved by the Municipal Council (vide Sessional Paper XXXV. of 1878), there is no doubt that it runs through a very populous part of the town, but the only advantage it possesses over my trace is in the passenger traffic expected from the Dam street station, which is only 3-8ths of a mile from the Pettah station; and when its enhanced cost, on account of the tunnel through Wolfendahl and possible compensation to owners of property over the tunnel is taken into consideration, it is a question whether the cost of construction of that section would not render the whole branch to Mattakkuliya unremunerative.

I have, &c.,
J. STODDART,
Acting Surveyor-General.

[F. G. and H. not printed.]

I.

Traffic to and from Mattakkuliya for Six days ended 21st May, 1881.

Particulars.	Taken at St. James' Church, Mutwal. To Mattakkuliya. No. of Vehicles.	No. of Persons.	From Mattakkuliya. No. of Vehicles.	No. of Persons.	Taken at Bellevue junction, Alutmáwata. To Mattakkuliya. No. of Vehicles.	No. of Persons.	From Mattakkuliya. No. of Vehicles.	No. of Persons.
Carriages ...	210	228	180	286	133	210	52	129
Hackeries ..	320	454	276	620	192	260	100	136
Carts, loaded ...	196	—	452	—	98	—	78	—
„ empty ...	220	—	196	—	140	—	106	—
Males ...	—	1,600	—	1,980	—	2,960	—	2,760
Females ...	—	560	—	990	—	975	—	844
Children ...	—	270	—	266	—	810	—	860
	946	3,112	1,104	4,142	563	5,215	336	4,729
On Alutmáwata road ...	563	5,215	336	4,729				
Total ...	1,509	8,327	1,440	8,871				

K.

Traffic to and from Mattakkuliya for Three days ended 8th March, 1882, taken from 6 A.M. to 6·30 P.M.

Particulars.	Taken at St. James' Church, Mutwal. To Mattakkuliya. No. of vehicles.	No. of persons.	From Mattakkuliya. No. of vehicles.	No. of persons.	At Bellevue junction to Alutmáwata road. To Mattakkuliya. No. of vehicles.	No. of persons.	From Mattakkuliya. No. of vehicles.	No. of persons.	At Junction of Roads at Madampitiya. To Mattakkuliya. No. of vehicles.	No. of persons.	From Mattakkuliya. No. of vehicles.	No. of persons.
Carriages ...	89	189	71	152	20	65	34	87	29	58	30	68
Hackeries ...	161	216	126	260	57	131	65	169	85	184	159	301
Carts, loaded ...	121	—	123	--	54	—	49	—	57	—	31	—
„ empty ...	110	—	98	—	64	—	61	—	42	—	59	—
Males ...	—	1658	—	1667	—	1546	—	1472	—	2269	—	2221
Females ...	—	455	—	440	—	585	—	594	—	702	—	726
Children ...	—	357	—	209	—	528	—	472	—	803	—	840
	481	2875	418	2728	195	2858	209	2794	213	4016	279	4156
At Alutmáwata	195	2858	209	2794								
At junction of roads at Mádampitiya ...	213	4016	279	4156								
	889	9749	906	9678								

L.

Traffic on Hendala Canal, taken at the Toll Station on the Canal.

From Negombo.

Taken 9 P.M. to 11 A.M.	Padda Boats.		Double Canoes.			Other Boats.		
Days.	No. of Boats.	Loaded with	No. of Boats.	Loaded with	No. of Passengers.	No. of Boats.	Loaded with	No. of Passengers.
Thursday ...	4	Salt	2	Salt fish	12	2	Nil	27
	1	Cocoanuts	2	Vegetables	16	2	Vegetables	20
	2	Copperah	1	do.	26	—		—
	2	do. & dry fish	—		—	—		—
	9		5		54	4		47
Friday ...	5	Salt, 2 dry fish	4	Passengers	32	1	Passengers	10
	2	Copperah	1	do.	12	1	Dry fish	4
	1	Salt	—		—	—		—
	17		10		98	6		61
Saturday ...	4	Salt	3	Salt fish	—	1	Vegetables	—
	3	Copperah	1	do.	28	1	do.	12
	3	Salt fish	1	Vegetables	12	—		—
	1	Timber	—		—	—		—
	28		15		138	8		73
Sunday ...	5	Salt	2	Passengers	46	1	Cocoanuts	12
	1	Timber	2	Vegetables	32	2	Sundries	18
	2	Dry fish	1	Copperah	6	1	do.	12
	2	Copperah	—		—	—		—
	38		20		222	12		115
Monday ..	4	Salt	1	Vegetables	8	1	Fish	4
	1	Timber	2	Salt fish	16	—		—
	1	Dry fish	1	Vegetables	5	—		—
	44		24		251	13		119
To Negombo.								
Thursday ...	2	Rice	2	Nil	22	2	Nil	22
	1	Nil	1	do.	16	1		6
	—		1	Sundries	12	—		—
	—		—		—	—		—
	3		4		50	3		28
Friday ...	2	Rice	1	Sundries	22	2		20
	1	Sundries	1	do.	10	—		—
	—		—		—	—		—
	6		6		82	5		48
Saturday ...	1	Rice	3	Passengers	42	—		—
	1	Sundries	1	Sundries	6	—	Nil	—
	1	Nil	—		—	—		—
	—		—		—	—		—
	9		10		130	5		48
Sunday ...	4	Nil	1	Sundries	15	4	Passengers	46
	1	Rice	4	do.	58	1	Nil	—
	—		2	do.	20	—		—
	—		—		—	—		—
	14		17		223	10		94
Monday ...	2	Rice	2	Passengers	36	4	Passengers	22
	1	Nil	1	do.	16	1	Nil	—
	—		2	do.	24	—		—
	17		22		299	15		116

Number of Persons crossing Ferries.

At Modara from 6 a.m. to 6 p.m.

Wednesday ...	136
Thursday ...	148
Friday ...	139
Saturday ...	143
Monday ...	162
Tuesday ...	134
	862

Wattala to Mattakkuliya from 6 a.m. to 6 p.m.

Wednesday ...	132
Thursday ...	146
Friday ...	110
Saturday ...	168
Monday ...	192
Tuesday ...	87
	835

N.B.—The above are such as cross either way once during the 12 hours, the return journey not taken into account.

A padda boat carries 12 to 15 tons.

Double canoes and other boats 2½ to 4 tons.

Total number of Persons to Negombo ... 415
Do. Boats do. ... 47

Total number of Boats from Negombo ... 81
Do. Persons do. ... 370

M.

STATEMENT of Traffic to and from Mills, for 1881.

Mill.	*To and from Wharf.* Direction of Traffic.	Tons.	Rate per Ton paid.	Amount.	*To and from Maradána.* Direction of Traffic.	Tons.	Rate per Ton paid.	Amount.
			Rs. cts	Rs. cts.			Rs. cts.	Rs. cts.
Blomendal (Courthope, Bosanquet & Co.)	To Wharf	1875	0 88	1650 0	To railway	175	0 60	105 0
	To Mills	about 230	0 70	161 0	To Mills	1500	1 25	1875 0
Uplands (Whittall & Co.)	To Wharf	4575	0 75	3431 0	To Mills	3708	0 75	2781 0
	To Mills	450	—	338 0	To Railway	104	—	0 78
Kotahéna (Baker & Hall)	To Wharf	1500	0 75	1125 0	To Mills	2000	0 75	1500 0
	To Mills	50	0 75	37 50	To Railway	20	0 75	15 0
Hulftsdorp (Messrs. G. and W. Leechman)	To Wharf	3301 carts	0 75 per cart	2475 75	To Railway	3589 carts	0 50 per cart	1794 50
	To Mills	2138 carts	0 75 per cart	1603 50	To Mills	606 carts	0 50 per cart	303 0
		14119		10821 75		11619		8374 28

Messrs. G. & W. Leechman state as follows :—Our custom is to pay for all traffic *at per cart*, and each cart conveys an average weight of *one ton*, so that the weight in tons may be said to be identical with the number of carts. The weight of the goods sent from our mills to the wharf is reckoned on the *nett* and not on the gross *weight;* so that, if payment were to be made on the gross weight there would be an increase of say 500 *tons*.

In ordinary years the traffic from the wharf to the mills would show an additional 1,500 *tons* or thereabouts, our stocks being much larger at the beginning of 1881 than usual, and of course the returns appear previous to 1881, and are not included in the within statement.

N.

RETURN of Salt and Dry Fish forwarded from Colombo Station to all Stations for the year ending 1880.

Salt.	Tons.	cwt.	*Dry Fish.*	Tons.	cwt.
January	357	1	January	75	14
February	258	4	February	92	5
March	222	0	March	121	8
April	315	12	April	92	8
May	334	16	May	120	7
June	292	12	June	143	12
July	174	18	July	97	16
August	310	4	August	187	6
September	323	1	September	268	12
October	243	15	October	188	0
November	357	12	November	181	0
December	293	4	December	180	14
Total Tons—	3,482	19	Total Tons—	1,749	2

O.

TRAFFIC to and from Mattakkuliya and Grandpass, taken for Three Days ended 11th March, 1882.

Taken at Junction of Elie Lane, Mutwal.					Taken at end of Quarry road at Alutmáwata.			
Taken from 6 A.M. to 6·30 P.M.	To Mattakkuliya.		From Mattakkuliya.		To Mattakkuliya.		From Mattakkuliya.	
Particulars.	No. of Vehicles.	No. of Persons.	No. of Vehicles	No of Persons.	No. of Vehicles.	No. of Persons.	No. of Vehicles.	No. of Persons.
Carriages ...	199	538	141	404	8	21	15	36
Hackeries ...	215	556	186	475	41	97	24	59
Carts, loaded ...	88	—	284	—	14	—	29	—
„ empty ...	158	—	150	—	67	—	51	—
Males ...	—	2,015	—	2,034	—	2,004	—	2,157
Females ...	—	582	—	446	—	1,107	—	1,399
Children ...	—	508	—	351	—	479	—	591
	660	4,199	761	3,710	130	3,708	119	4,242

Taken at New Road to Mádampitiya.					Taken on Grandpass road at Junction with Cemetery road.			
Taken from 6 A.M. to 6·30 P.M.	To Mattakkuliya.		From Mattakkuliya.		To Grandpass.		From Grandpass.	
Particulars.	No. of Vehicles.	No. of Persons.	No. of Vehicles.	No. of Persons	No. of Vehicles.	No. of Persons.	No. of Vehicles.	No. of Persons.
Carriages ...	24	70	28	81	125	271	70	197
Hackeries ...	76	180	68	159	406	935	424	1,042
Carts, loaded ...	44	—	62	—	178	—	555	—
„ empty ...	52	—	53	—	333	—	177	—
Males ...	—	825	—	842	—	6,651	—	7,009
Females ...	—	350	—	334	—	2,067	—	2,879
Children ...	—	150	—	160	—	788	—	664
Total ...	196	1,575	211	1,576	1,042	10,712	1,226	11,891

ABSTRACT.

		To Mattakkuliya.			From Mattakkuliya.	
		Vehicles.	Persons.		Vehicles.	Persons.
At Junction of Elie Lane	...	660	4,199	...	761	3,710
On Alutmawata road	...	130	3,708	...	119	4,242
On Madampitiya road	...	196	1,575	...	211	1,576
		986	9,482		1,091	9,528
On Grandpass road	...	1,042	10,712		1,226	11,891

P.

The COLONIAL SECRETARY to the CHAIRMAN of the Mattakkuliya Railway Commission.

Colonial Secretary's Office,
Colombo, 13th April, 1882.

SIR,—I AM directed to transmit to you the accompanying appraisement of the properties under which the trace for a railway tunnel passes.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

Situation.		Assessment Number of Houses and Lands.		Names of Owners.		Valuation of the entire Land including the Buildings standing thereon.
New Moor-street	...	92	...	Kappa Odayar Lebbe Segu Lebbe	Rs.	1,250
Do.	...	91	..	Idroso Lebbe	...	1,500
Do.	...	90	..	Tyisa Umma, wife of M. I. Abdul Sateff Lebbe		3,000
Do.	...	89	...	Uduma Lebbe	...	4,000
Do.	...	53	...	Trustees of the Moorish Mosque	...	500
Do.	...	54	...	Tyise Lebbe Marikar	...	3,500
Do.	...	55	...	Estate of Casi Lebbe Marikar Mudaliyar	...	2,000
Do.	...	56	...	Lebbe Kando Marikar	...	1,500
Do.	...	57	...	Isbu Lebbe Uduma Lebbe	...	1,500
Do.	...	58	...	Hadje Marikar Saibu Dore	...	1,500
Do.	...	59	...	Wappu Marikar	...	3,000
Do.	...	60	...	Sinna Marikar Wappu Marikar	...	2,000
Do.	...	61	...	Meera Lebbe Wappu Marikar	...	2,000

Situation.	Assessment Number of Houses and Lands.	Names of Owners.	Valuation of the entire Land including the Buildings standing thereon.
Kuruwe-street ...	15 & 16 ...	Hon. A. Alwis and Rev. S. Dias	Rs. 15,000
Do. ...	17 ...	Estate of late Maha Mudaliyar A. Perera	... 2,500
Do. ...	2 ...	Mr. J. L. Perera, Proctor	... 16,000
Do. ...	1 ...	Hon. A Alwis	... 8,000
Barber-street ...	104 ...	Kader Saibu	... 12,000*
Do. ...	2, 3 & 4 ...	Estate of late J. De Saram, Mudaliyar	... 25,000
Do. ...	5 & 6 ...	do. Mr. Perera, Mudaliyar	... 3,500
Do. ...	7	do. do.	... 1,250
New Chetty-street ...	2 ...	Mr. J. R. Bell	... 1,250
Do. ...	3 ...	S. P. Ramanathan	... 2,000
Do. ...	4 ...	Louisa Rodrigo Candappa	... 1,500
		Total—Rs.	115,250

D. A. GUNATILLEKE,
Vidána Mudaliyár.

* Only a very small strip towards the northern corner of this land will have to be acquired, and that strip is worth about Rs. 300. This remark is made at the instance of the Chief Surveyor.

Q.

ESTIMATE of Receipts and Working Expenses of the proposed Railway to Mattakkuliya, laid before the Commission on the proposed Mattakkuliya Railway by the Traffic Manager.

Mills.	Direction of Traffic.	Tons.	Rate Per Ton.	Amount.		Direction of Traffic.	Tons.	Rate Per Ton	Amount.	
			cts.	Rs.	cts.			cts.	Rs.	cts.
Kotahéna ...	From wharf	50	50	25	0	From Maradána	2,000	50	1,000	0
	To "	1,500	50	750	0	To "	20	50	10	0
Uplands ...	From "	450	50	225	0	From "	3,708	50	1,854	0
	To "	4,575	50	2,287	50	To "	104	50	52	0
Blomendahl ...	From "	230	50	115	0	From "	1,500	50	750	0
	To "	1,875	50	937	50	To "	175	50	87	50
Mattakkuliya (Stevenson's) ...	From "	700	75	525	0	From "	350	75	262	50
	To "	1,400	75	1,050	0	To "	525	75	393	75
Mattakkuliya (Armitage) ...	From "	600	75	450	0	From "	—	—	—	
	To "	3,000	75	2,250	0	To "	350	75	262	50
Salt and dry fish...	—	—	—	—		To "	5,000	75	3,750	0
	Total...			8,615	0	Total...			8,422	25

Summary.

Traffic between Wharf and Mattakkuliya	8,615	0
Do. Maradána do.	8,422	25
Coaching receipts	40,000	0
Total estimated receipts...	57,037	25
Estimated working expenses at Rs. 1·40 per train mile or over 60 per cent. of receipts	34,750	0
Nett receipts—Rs.	22,287	25

R.

The RESIDENT ENGINEER to the CHAIRMAN, Mattakkuliya Railway Commission.

Ceylon Government Railway,
(Engineer's Department,)
Colombo, 16th March, 1882.

SIR,—WITH reference to my evidence when before the Commission, I have the honour to state that the line along the Grandpass route was set out in July, 1880, and I unofficially brought this before the Hon. the Colonial Secretary at the time. I left for England in August, and I find this line was not officially brought under the consideration of Government. I therefore now forward on a map of the town of Colombo this route, laid down in *black lines*, for the information of the Commission.

2. If the map is studied, it will be seen there are important roads which bring passengers on to the Grandpass road, and that to make a line remunerative to Mattakkuliya it is necessary it should be supplemented by the large passenger traffic this line would get before branching off from the Grandpass road towards Mattakkuliya.

3. Mattakkuliya itself is "Lands' End," and a large passenger traffic cannot be got from there.

4. By the route running past Uplands and Blomendahl Mills, there will be a very poor intermediate passenger traffic. Of this there cannot be a doubt, and the traffic from Mattakkuliya itself would not pay unless supplemented by a large intermediate traffic.

I am, &c.,
EDW. STRONG,
Resident Engineer.

S.

The Hon. the COLONIAL SECRETARY to the CHAIRMAN, Mattakkuliya Railway Commission.

Colonial Secretary's Office,
Colombo, 4th April, 1882.

SIR,—I AM directed to transmit to you the accompanying petition for the consideration of the Commission now sitting to enquire and report respecting the Mattakkuliya Railway.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

Colombo, 24th March, 1882.

To HIS EXCELLENCY SIR JAMES R. LONGDEN, K.C.M.G.,
Governer and Commander-in-Chief in and over the Island of Ceylon and the Dependencies thereof.

The Humble Petition of the Undersigned and other Inhabitants of Mattakkuliya, Mutwal, Madampitiya, and Grandpass, whose signatures appear in the papers hereunto annexed, marked A, B, & C.

MAY IT PLEASE YOUR EXCELLENCY,—THAT the Petitioners, in venturing to submit their humble prayer for your Excellency's gracious consideration and disposal, feel an encouragement in that your Excellency has, during your Excellency's Government, uniformly distinguished yourself by giving the prestige of your countenance and support to undertakings likely to prove beneficial to the largest number of the people, as well as by your Excellency's courageous and unequivocal refusal to encourage visionary and extravagant schemes, of questionable general usefulness, or such as are likely only to benefit a minority at the expense of the great body of the population placed under your Excellency's rule.

The Petitioners are persons living in places likely to be traversed by the proposed Mattakkuliya railway; and they humbly deem it a duty they owe as much to themselves as to your Excellency, who is so pronouncedly in the people's favour, to submit what they humbly think are reasons adverse to sanctioning the opening of the proposed line of railway.

1. As far as it is competent for persons in the position of the Petitioners to form an opinion, they feel justified in submitting that the present traffic obtainable at Mattakkuliya from the district of Negombo is barely sufficient to keep all the bullock carts of the place fully employed; and they are not aware of any causes at work which may produce such a sudden development of traffic as would afford sufficient and remunerative employment for a railway.

2. That even such traffic as may be expected could only be obtained from a proportionate reduction in the Municipal Revenues from such sources as the toll levied on the Bridge-of-Boats, the rent of the Municipal markets, &c., which cannot be regarded in the light of absolute revenue, but simply as the transfer of revenue from one head of receipt to another.

3. A large proportion of the traffic of Negombo finds its way by means of the suburban trains through the three stations of Hunupitiya, Veyangoda, and Minigama, and the proposed Mattakkuliya railway will depend for a large portion of its revenue upon traffic withdrawn from the Main Line.

4. Inconsiderable as salt may be as an item in the probable traffic of the proposed Mattakkuliya railway, its precarious production in the Puttalam District renders it unworthy of being relied upon as a permanent source of traffic. It was only very lately that salt had to be brought to Colombo by means of ships from Tuticorin.

5. Passenger traffic between Mattakkuliya and Colombo cannot be expected to yield any appreciable amount of revenue, as most of the persons who at present count as foot-passengers belong to the cooly class, who cannot afford to pay train-fare except occasionally and as a luxury. Persons of the better class who reside in Mattakkuliya, and who are able habitually to avail themselves of the train, are few, if any; and, as regards passengers from Negombo who travel by the coach, it may be observed that there is apparently no reason why they should avail themselves of the train for such a small portion of their journey, as the coach takes them straight on to the Pettah or the Fort as they may desire.

6. The Petitioners do not plead for any particular class or section; but, as they honestly believe, they represent the interests of the general community; and they have a strong conviction that a railway within such a short distance will, in place of benefiting all classes, cause serious loss of employment to many, whilst it may benefit but a few. Some of the most earnest and competent economists of this country are known to attribute to this, among other causes, the large increase of crime in recent years; and although this of itself could not be urged as a reason where the question refers to a line of such extensive usefulness as the Main Line to Kandy, the Petitioners think it a cogent argument against a line so unimportant and uncalled for as the one to Mattakkuliya.

7. Your Excellency could also bring to bear on the consideration of this question the experience acquired by the experimental suburban trains. The traffic which they were expected to develop does not appear to have sprung up even after this long trial; and it is a fact that they are but poorly patronized by even passengers. But considering that Mattakkuliya is only 3½ miles distant from Colombo, a railway line to reach it would appear to be far less a public necessity than even the suburban trains.

8. That calculations of traffic, based upon statistics, furnished by persons more or less interested, may prove disappointing in the end, is evident from the history of the Mátalé railway; and as in railways,

as much as in other things, there is the danger of supply being in excess of demand, the safest policy will be to wait till traffic has sufficiently developed itself so as to render a railway a real necessity, and not to open a railway with the view to develop a traffic that does not exist, or which the existing means of transport can satisfy; and this precaution is the more necessary in regard to a venture of the kind of the Mattakkuliya railway, which even its promoters will admit is not intended to tap any important district where any new products are attempted to be raised.

9. A decrease in the cost of transport of goods belonging to a few firms of European merchants is the highest good attainable by the proposed railway. But firms are known to fail and stores to remain shut up for years; it would be injudicious therefore to expend so large an amount of public money in dependence upon speculations subject to such vicissitudes. Others, besides these, who interest themselves in promoting the scheme, are those, likewise, who have the solely selfish object in view of amassing a fortune by directing the proposed line to traverse alongside of their own lands, for which they hope to obtain exorbitant prices.

10. The so-called memorial in favour of the Mattakkuliya railway is purely a production of the persons above referred to. This will be apparent from the greater number of the signatures attached to it, which are those of persons residing anywhere but in Mattakkuliya, Mutwal, Mádampitiya or Grandpass—persons who have to apprehend no loss, but who speculate on some profit turning up to themselves. It may be as well also to note here the fact that there is not along the Mattakkuliya line land available to be converted into building lots for dwelling-houses as there is along the sea-side line; and that residents of the Pettah could find cheap houses along the line is simply held out as a bait to enlist their support in favour of the Mattakkuliya line.

11. The Petitioners would also urge on your Excellency the present financial position of the colony, and the by-no-means-overflowing state of the Island exchequer, as reasons which will weigh with a prudent and far-seeing Government in embarking in measures of doubtful and remote utility, such as the proposed Mattakkuliya railway. The completion of the Mádampitiya roads, the provision of flood-outlets, the opening of more cross-roads where there is a block of traffic at present, and the sanitary improvement of over-crowded centres of population, besides other works of acknowledged public utility, if not urgency, are allowed to remain in abeyance, by reason of the depressed condition of the finances of the colony; and it would ill-become a paternal Government at this point of time to give its sanction to a scheme of limited and remote, if not doubtful utility. If the Petitioners, being the resident inhabitants, are allowed a voice in the matter of choosing either a road or a railway, they beg humbly but emphatically to declare in favour of completing the Mádampitiya road, which is a work partially executed, and which your Excellency, as well as your Excellency's predecessor, are pledged to see completed. A road from Layard's Broadway through the open fields is, it will be admitted, a work of the first importance on sanitary and economic grounds. It is well known that Mattakkuliya, Grandpass, and Kotahéna abound in land of the nature of swamps or morasses, and the filling up of them ought to be a primary consideration with a Government having to provide living space for a teeming population; and, as they are, the swamps are known to seriously impair the salubrity of even the few places reclaimed for human occupation. But when cross-roads such as the one herein suggested are opened, the swamps will be gradually reclaimed.

12. Speaking of the floods to which Colombo is subject periodically, the Petitioners are also reminded to add that the line of the proposed railway will have to be determined *after* the more urgent question of flood-outlets has been finally and satisfactorily settled. And it is too well known to Government to require being reiterated here, or any particular stress being laid on the fact, that Grandpass, Mattakkuliya and Kotahéna suffer the worst during the periodical floods.

13. The Petitioners beg also to submit that during the periodical high-water the traffic in the Kelaniya being impracticable, goods from Negombo will mostly be sent by carts, and during such seasons all the traffic expected from this source will be lost to the Mattakkuliya railway.

The final decision of this question rests with your Excellency. The Petitioners as humble subjects dare not set themselves up to decide one way or the other; but they have simply discharged an obvious duty in presenting to your Excellency the other side of a question of which only one side has been hitherto exhibited.

The Petitioners therefore pray that your Excellency may be graciously pleased to consider the question in its entirety, and give due weight to the various interests involved, before awarding your Excellency's sanction to opening the proposed railway to Mattakkuliya.

I.

POPULATION, according to the Census of 1881, of the Municipal Wards of Colombo.

	Persons.
Fort Ward	1,008
Pettah	6,955
St. Paul's	15,465
St. Sebastian	7,351
Kotahéna	26,692
New Bazaar	14,064
Maradana	17,801
Slave Island	11,426
Kollupitiya	10,340
	110,502

POPULATION, according to Census of 1881, of Villages to the North of Colombo.

Village.	Population.
Hendala	553
Hekitta	412
Leper Hospital... ...	137
Wattalo	1,347
	2,449

IX.—1882.

CORRESPONDENCE

RELATING TO THE

GALLE HARBOUR IMPROVEMENTS.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
GEORGE J. A. SKEEN, GOVERNMENT PRINTER, CEYLON.

1882.

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GALLE HARBOUR IMPROVEMENTS.

No. 1.

The Director of Public Works to the Hon. the Colonial Secretary.

No. 1,032/54. Colombo, 16th June, 1882.

Sir,—With reference to the annexed copy of letter No. 596 of the 13th instant from the Provincial Assistant, Galle, reporting that if the works of improvements to the Galle Harbour are to be continued during the next north-east monsoon, it will be necessary that a vote of Rs. 5,000 should be taken in the Supplementary Supply Bill for this year,—

2. As the mail steamers have now left Galle, and make Colombo their station, I beg to request your instructions as to whether the work at Galle should be suspended, and the diving apparatus taken into store; and also whether the boats and other material of a perishable nature employed on the works should be sold.

I am, &c.,
A. MURRAY,
for Director of Public Works.

Enclosure.

The Provincial Assistant, Southern Province, to the Director of Public Works.

No. 596. Galle, 13th June, 1882.

Sir,—Referring to your letter No. 473 of 7th instant, I have the honour to inform you that there was only a balance of Rs. 540·74 on the 1st instant; of this balance, a sum of Rs. 450 is necessary to meet the half-pay of the diver and the men in charge of the diving boat still the end of August next.

2. If the improvement to the Galle Harbour is to be continued during the next N.E. monsoon of the current year, it would be necessary that a vote be taken in the Supplementary Supply Bill for the current year for a sum of Rs. 5,000; otherwise, be good enough to let me have your instructions in the matter to enable me to give timely notice to the diver, and as to what I am to do with the diving boats, &c.

I am, &c.,
J. A. ARNEIL,
Provincial Assistant.

No. 2.

The Hon. the Colonial Secretary to the Director of Public Works.

No. 982. Colombo, 24th June, 1882.

Sir,—With reference to your letter of the 16th instant, No. 1,032, I am directed to state that no supplemental vote can be taken this year, and I am to request you to furnish me with a general report, to be laid before the Legislative Council, of the result of the works undertaken at Galle, and carried out under the annual votes, for the last seven years.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

No. 3.

The Director of Public Works to the Hon. the Colonial Secretary.

No. 1,257. Colombo, 22nd July, 1882.

Sir,—With reference to your letter No. 952 of the 24th ultimo, I have the honour to annex a report showing the result of the works undertaken in improving the Galle Harbour under the annual votes for the last seven years.

2. The two rocks that were most in the way of the large Peninsular and Oriental and French Mail Steamers entering and anchoring in the Galle Harbour were the Outer and Inner Avarea rocks, and it became necessary to clear out these rocks to give a depth of thirty feet of water over them at low-water to make room for the increased number and size and draught of water of the steamers of late years entering the harbour.

3. These rocks were solid masses of compact gneiss and were blasted by dynamite, and the débris had to be picked up and removed from the anchorage. Owing to the heavy rolling swell from the ocean running into Galle Harbour, picking up these pieces of rock was a difficult and dangerous operation, some of the pieces weighing as much as fifty tons.

4. The Avarea rocks are now removed and the space they occupied has for years been used as a steamer anchorage.

5. The Capera rock, which was a large patch of rock on the western side of the harbour, has been cleared away from having only a depth of 13 feet of water over it to a depth of 24 feet. This enables the smaller class of steamers and sailing ships passing over and using this portion of the harbour.

I am, &c.,
J. F. CHURCHILL,
Acting Director of Public Works.

STATEMENT of Expenditure incurred and Work done in the improvement of the Galle Harbour during the last Seven Years.

Number of Estimate.	Date of Sanction.	Estimate Amount.		Expended.		Balance.		Stone blasted taken up and removed.
		Rs.	cts.	Rs.	cts.	Rs.	cts.	Tons.
20	14th January, 1876 ...	10,000	0	9,789	82	210	18	820
17	2nd March, 1877 ...	10,000	0	9,979	74	20	26	423
11	31st January, 1878 ...	10,000	0	9,999	26	0	74	1,338
10	16th do. 1879 ...	10,000	0	9,496	97	503	3	433
3	5th do. 1880 ...	10,000	0	9,827	70	172	30	1,785
3	4th do. 1881 ...	10,000	0	9,973	58	26	42	1,025
7	17th do. 1882 ...	5,000	0	5,000	0	—		2,035
	Total ...	65,000	0	64,067	7	932	93	7,859

REMARKS.

A sum of Rs. 8,890, being value of buoys and chains ordered out from England for the use of the Master Attendant's Department, has been paid out of this vote, thus showing the actual expenditure in effecting improvements to the harbour as Rs. 55,177·07.

The Inner Avarea, over which there was 22½ feet depth of water, has been increased to a depth of 30 feet, the rocks having been blasted and removed. The Outer Avarea from 24 to 30 feet.

The Capera reef, which originally had only 13 feet of water over it, has now an increased depth of water of from 27 to 30 feet all over, with the exception of one small patch, about 60 feet in length, which still remains, over which there is only a depth of water of 24 feet, this being the least depth of water now over the whole patch. And the completion of this portion would give an extra harbour space for the accommodation of four large steamers.

True copy.
A. MURRAY,
for Director Public Works.

J. A. ARNIEL,
Provincial Agent.

Public Works Department,
Galle, 18th July, 1882.

No. 4.

The Hon. the COLONIAL SECRETARY to the DIRECTOR OF PUBLIC WORKS.

No. 1,188. Colombo, 29th July, 1882.

SIR,—I AM directed to acknowledge the receipt of your letter No. 1,257 of the 22nd instant, and to acquaint you that no further annual votes will be taken for the improvement of the Galle Harbour in the manner heretofore provided for in the Estimates. Provision for any improvement which may hereafter be required for the better protection of vessels in the Harbour can only be made after careful inquiry, and when plans and estimates shall have been made and laid before the Legislative Council, and approved by the Council, and confirmed by Her Majesty's Government.

I am therefore to request you to make arrangements for ceasing work when the present vote is exhausted.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

X.—1882.

REPORT

ON THE

KAYTS HARBOUR IMPROVEMENTS.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

KAYTS HARBOUR.

Colombo, 3rd August, 1882.

The Port of Kayts is about 11 miles from Jaffna. It is the favourite resort of native craft in stormy weather; and during the prevalence of the South-West Monsoon, brigs, schooners, barques and dhonies are laid up there in perfect safety.

Between Kayts and Jaffna there is water communication, and boats 40 feet long, 8 feet broad, and 3½ feet deep run the whole distance with cargo for about Rs. 1·50, and carry passengers for 3 cents each.

On the Jaffna side of the Kayts jetty there is a basin covering an area of 486 acres, and over 50 acres of this there is a depth of 11 feet of water, and this space is sufficient to accommodate more craft than are ever likely to visit the place at any one time.

Between the jetty on the Kayts shore and that on the opposite side (Karattívu) there is from 8 to 13 feet of water, but with a rocky bottom throughout, and from the jetty seawards as far as Fort Hammonhiel there is about an average depth of 8½ feet, and the distance between the two points is 1½ mile or 2,640 yards, with rock covering at least three-fourths of the whole distance; consequently, to cut a channel 33 yards wide and 12 feet deep necessitates the removal of 76,230 cubic yards of stone (probably all coral) and 19,057 yards of sand.

From point A on plan* it is 1,386 yards to B,† and there is but an average of 7½ feet of water over it; therefore, 68,607 cubic yards of what is supposed to be sand, but may be partially rock, will have to be removed in this section.

From point B seawards it is 1,232 yards to where 12 feet of water is found, and to give this an average depth of 12 feet it will be necessary to remove 77,164 cubic yards of sand.

The distance from Kayts jetty to 12 feet of water is just three miles, but a vessel drawing 12 feet of water would require a channel cut at least another mile seawards before sufficient depth would be reached to allow for "pitching" in rough weather. The channel would therefore be four miles long, and I believe it would require constant dredging. I am of opinion there has been no silting up since the locality was surveyed by Mr. J. J. Franklin, in 1846, but I feel confident that a trench 33 yards wide in shallow water constantly agitated, and for six months of the year a raging sea, would fill up almost as fast as it could be cut; at all events, that part of it outside of Fort Hammonhiel would, and it is 2½ miles long.

I regret the incomplete state of the plan I now hand in, but in consequence of the very rough weather I experienced during my short stay at Kayts I found it impossible to do more, and but for the kind and prompt assistance rendered by Mr. Twynam, the Government Agent of Jaffna, I could not have accomplished anything like the amount of work I did there. The principal difficulty the small ships now entering Kayts encounter is in rounding Hammonhiel from B on plan to X, a distance of 2,486 yards; and, if the day should ever come when there will be nothing else for the *Merak* to do, I would recommend her being employed to deepen that part of the channel from 7 feet, its present depth, to 9 feet, which would be all that is ever likely to be required by the native craft frequenting the port.

G. H. SYMONDS.

* Not published.

† Point A is in 7 or 7½ feet of water and lies almost in a straight line drawn from Fort Hammonhiel to Kayts west point. Point B is in 8½ feet of water and lies nearly north-west by north from A.

XI.—1882.

COLOMBO HARBOUR WORKS.

CORRESPONDENCE

RELATING TO

A PROPOSED GRAVING DOCK AT COLOMBO.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

PROPOSED GRAVING DOCK AT COLOMBO.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.—No. 265. Downing Street, 11th August, 1882.

SIR,—I HAVE the honour to transmit to you for your information, with reference to your Despatch No. 101 of 7th March last, the documents specified in the annexed schedule.

I have, &c.,
KIMBERLEY.

Date.		Description of Document.
15th April	...	Letter from Colonial Office to Crown Agents.
9th August	...	Letter from Crown Agents to Colonial Office.

Copy correspondence respecting proposed Graving Dock at Colombo.

Enclosure No. 1.

The COLONIAL OFFICE to the CROWN AGENTS.

Downing Street, 15th April, 1882.

GENTLEMEN,—I AM directed by the Secretary of State for the Colonies to transmit to you the accompanying copy of a Despatch from the Governor of Ceylon, forwarding a copy of a resolution of the Legislative Council in favour of obtaining Sir John Coode's opinion as to the respective cost of a Graving Dock at the Lotus Pond or some equally suitable point, a Patent Slip to accommodate vessels up to 1,500 tons register, and an Hydraulic Floating Dock of the same capacity; and I am to instruct you to obtain Sir John Coode's opinion on these points, as desired by the Ceylon Government.

I am, &c.,
JOHN BRAMSTON.

Enclosure No. 2.

The CROWN AGENTS to the COLONIAL OFFICE.

Downing Street, London, 9th August, 1882.

SIR,—WITH reference to your letters of the 15th of April last and 1st instant, I have the honour to enclose for the information of the Earl of Kimberley a copy of a communication which we have received from Sir John Coode respecting the proposed Graving Dock at Colombo.

I have, &c.,
E. E. BLAKE.

Sub-Enclosure in Enclosure No. 2.

Sir JOHN COODE to the CROWN AGENTS.

5, Westminster Chambers,
London, S.W., 3rd August, 1882.

Colombo Harbour.

Proposed Graving Dock, Patent Slip, or Hydraulic Floating Dock.

GENTLEMEN,—I BEG to acknowledge the receipt of your letter of 2nd instant, and in reply thereto have to say that soon after the receipt of your letter of 17th April I communicated with the Resident Engineer with reference to a survey, sections, and borings of the site, with which it was necessary I should be furnished before reporting to you on the subject. In the absence of the above-named particulars, I could only advise in general terms, and should be unable to arrive at satisfactory estimates of cost. I gather that Mr. Kyle has put the work in hand, and will no doubt transmit the results to me as early as possible. I will, however, write him on the subject by the mail per "French Packet" leaving to-morrow.

I have, &c.,
JNO. COODE.

XII.—1882.

CASH BALANCES OF THE COLONY.

STATEMENTS

SHOWING

I.—The Cash Balances of the Colony as on the latest date at which they have been ascertained.

II.—The Total Surplus Revenue on 31st December, 1881, including the Balances of all Lapsed Votes to that date.

III.—The Balance of Railway Construction Fund on 31st December, 1881.

IV.—The Amount available for appropriation from Unclaimed Balances of the Loan Board on 31st December, 1881.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

CASH BALANCES OF THE COLONY.

I.—STATEMENT showing the Cash Balances of the Colony as on the latest date at which they have been ascertained.

	Rs.	cts.
Cash Balance on the 30th June, 1882	1,362,416	52

II.—STATEMENT showing the Total Surplus Revenue on 31st December, 1881, including the Balances of all Lapsed Votes to that date.

[For above Statement see Blue Book of 1881, page 73.]

III.—STATEMENT showing the Balance of Railway Construction Fund on 31st December, 1881.

	Rs.	cts.
The Balance at credit of the Railway Construction Fund on 31st December, 1881, was	286,421	51

IV.—STATEMENT showing the amount available for appropriation from Unclaimed Balances of the Loan Board on 31st December, 1881.

	Rs.	cts.	Rs.	cts.
Amount of Unclaimed Balances of the Loan Board in deposit on the 31st December, 1881			99,620	69
Deduct—Amount appropriated by Ordinances Nos. 4 of 1879 and 14 of 1880 ...	125,000	0		
Less—Amount expended to 31st December, 1881	59,707	10		
			65,292	90
Balance on 31st December, 1881 ...			Rs. 34,327	79

The whole of this Balance is not available for appropriation as a certain sum must be reserved to meet claims that may arise, especially claims on account of minors.

W. H. RAVENSCROFT,
Auditor-General.

Audit Office,
Colombo, 9th September, 1882.

XIII.—1882.

DESPATCH

FROM

THE RIGHT HON. THE SECRETARY OF STATE

TRANSMITTING

OBSERVATIONS UPON THE REPORT OF THE DIRECTOR OF THE ROYAL BOTANIC GARDENS, PERADENIYA,

RELATIVE TO THE

INTRODUCTION OF NEW PRODUCTS INTO CEYLON.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

NEW PRODUCTS.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

Ceylon.—No. 212. Downing-street, 20th June, 1882.

SIR,—I HAVE the honour to inform you that various communications have been made to this office, by firms engaged in the business of supplying seeds to planters in the Colonies, complaining of the appointment of the Commission to enquire into the question of introducing New Products into Ceylon, a notice of which has appeared in Dr. Trimen's Report for 1881, and enquiring whether it is intended by Government to compete with, and, if possible, supersede private firms in supplying plants and seeds wholesale.

You will notice from the enclosed correspondence with Messrs. Christie and Company that I have given a distinct assurance that it is not intended in any way to interfere with the ordinary course of trade, but simply to relieve the pressure which has recently been put upon the Government Botanical Departments in connexion with the introduction of New Products.

I have no doubt the views which I have thus expressed are shared by your Government.

I have, &c.,
KIMBERLEY.

Enclosure No. 1.

The COLONIAL OFFICE to Messrs. CHRISTY & Co., KNOWLES & Co., DENNIS ROCK & Co., and Mr. J. W. DINHAM.

Downing-street, 20th June, 1882.

GENTLEMEN,—I AM directed by the Earl of Kimberley to acknowledge the receipt of your letter complaining of a suggestion of Sir J. Hooker, which has been recommended to the Ceylon Government by the Secretary of State, that the local Government should assist the planters in procuring seeds of certain new products, on the ground that the interference of Government in this matter will prejudicially affect the interests of the firms engaged in the business of supplying planters in the Colonies with seeds.

2. In order to explain the steps which have actually been taken by the Government, and to prevent any misunderstanding on the subject, his Lordship directs me to enclose for your information a copy of the letter to this Department in which Sir J. Hooker suggested the appointment of the Commission in question, together with a copy of the despatch transmitting Sir J. Hooker's letter to Ceylon.

3. The Commission was appointed solely for the purpose of relieving Government Departments, such as the Royal Gardens at Kew, from work which does not properly belong to them, their duties being not commercial, but scientific. The object in view was to introduce and acclimatise new staples—not to supply them in wholesale quantities; and it was proposed to invite the various Colonial and Indian Botanical Gardens to co-operate in supplying each other with new plants which are not to be procured through the usual commercial channels at low prices; but there is no intention on the part of Government to interfere with the ordinary course of trade, or to do anything which might injure the interests of the firms which supply seeds to the Colonies.

A copy of this correspondence will be sent to the Governor of Ceylon for his information and guidance.

I am, &c.,
R. H. MEADE.

Enclosure No. 2.

Messrs. T. CHRISTY & Co. to the COLONIAL OFFICE.

155, Fenchurch-street, London, E.C.,
2nd June, 1882.

Report of Botanical Gardens, Ceylon, 1881.

To the Secretary of State for the Colonies, Whitehall.

OUR Mr. Christy was at your office yesterday, and asked if he could be furnished with a copy of the document referred to as coming from "Sir Joseph Hooker to the Secretary of State, recommending the appointment of a small Commission for framing a scheme of Government assistance outside the Botanic Establishments." Also, a "copy of the decision of the Commission, which has recommended a scheme in which the Government undertakes to use the Imperial machinery at its disposal to procure the plants and seeds required." Enclosed is a copy of the "Planters' Gazette," published yesterday, which gives, on page 174, the paragraphs referred to.

As you had not received a copy of the "Botanical Report" for the year ending 1881, this draft may be of use to you, as we cannot spare the copy of the report we have in the office. With the exception of this paragraph, which may be explained, we consider the report of the highest order, and extremely valuable in the amount of information that it disseminates, and, generally speaking, we agree with the views expressed by the "Planters' Gazette."

We may state that our house and several others in the city have been to great expense in collecting both seeds and plants for commercial purposes; and should the Government adopt a plan of employing the Imperial machinery, we certainly ought to have time to quit our stocks, or the Government ought to purchase them. We do not entirely agree with the Editor of the "Planters' Gazette" that we shall have no chance left, because it has been frequently found that private commercial enterprize can compete with the Government in this class of business when the officers work honourably, and publish the details that come to their knowledge as they transpire.

You can, upon application, read our letter to Her Majesty's Commissioner of Works of 4th May, in which we show the loss which the despatch from your office dated 28th April, 1881, No. 142, and signed by Earl Kimberley, caused us and other merchants in the city who had stocks of Ceara Rubber seed.

We learn that Dr. Trimen is now on his road home, and although he only represents one of of the colonies, viz., Ceylon, we have so much reliance in his clear judgment, we shall hope he will explain matters more satisfactorily than they appear at present. The whole of the report shows his just appreciation of commercial interests, with the exception of that part which is recommended by the authorities at Kew.

We are, &c.,

THOS. CHRISTY & Co.

XIV.—1882.

COLOMBO HARBOUR DUES.

DESPATCHES

RELATIVE TO THE

INTRODUCTION

OF

INCREASED RATES OF PORT AND HARBOUR DUES IN COLOMBO.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

COLOMBO HARBOUR DUES.

No. 1.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Right Hon. the EARL OF KIMBERLEY.

No. 272.—*Miscellaneous.* Belihul-oya, 1st July, 1882.

MY LORD,—I HAVE recently had under consideration, with the advice of my Executive Council, the question of raising, in lieu of those now levied at Colombo, increased Port Dues for the purpose of defraying the annual cost of the Harbour improvements, which are, as far as the Southern Arm of the Breakwater is concerned, approaching completion.

2. The necessary powers for this purpose are given by Art. 6 of Ordinance 4 of 1874 to the Governor in Executive Council, subject to the sanction of Her Majesty's Government, and subject to the conditions that the revenue so raised shall not exceed the amount which may be required to cover the annual charges for the loan raised, the maintenance of the works, and the charges incidental to the efficient management, pilotage and lighting of the Port. No date is fixed by the Ordinance for the commencement of the new scale of charges, but it has been understood that they would be brought into force as soon as such material progress had been made with the protective works of the Breakwater as would justify the levying of an impost in return for the advantages offered by those works to the shipping frequenting the Port.

3. The surest proof that the shelter now afforded by the works now in progress—the completion of which may be anticipated next spring—will justify this measure, may probably be derived from the fact that the great Mail Companies of the Peninsular and Oriental and Messageries Maritimes lines have considered that the time had arrived for transfering their establishments from Galle to Colombo—an operation which was completed during the course of last month; and it has been considered by myself and my Council that the increased dues may fairly run from the 1st January, 1883.

4. The annual amount which it will be necessary to provide by means of the increased dues will be as follows:—Interest on a loan of £800,000—the amount to which the expenditure upon the Breakwater has been limited by a resolution of the Legislature—say, £31,750, or Rs. 381,000, at 1*s.* 8*d.* to the rupee; maintenance and other similar charges, say, Rs. 50,000; in all, Rs. 431,000.

5. In regard to the mode in which the above sum is to be raised, I have already, in my despatch No. 438 of the 3rd November, 1879, laid before your Lordship a correspondence with the Ceylon Chamber of Commerce, in which the whole subject is fully discussed and a scale of charges provisionally agreed to which were estimated to produce a sum nearly equivalent to the amount above quoted.

6. Two points, however, were left unsettled in that correspondence:—

(1) The Chamber of Commerce desired a slight modification of the scale of Port Dues, with a view of not pressing too heavily upon the large steamers which touch at Colombo for convenience, but in many instances without landing or shipping any large amount of cargo. This modification has appeared to myself and my Council to be judicious.

(2) It was proposed by the Chamber of Commerce that the rate of 12½ cents per ton, adopted for coasting vessels (native craft) under 200 tons burthen, should be extended to steamers in excess of that tonnage plying between Colombo and the ports in British India and Burmah, in lieu of the higher rate of 25 cents which is leviable upon all steamers and sailing ships exceeding the limit of 200 tons.

7. After giving every consideration to the views expressed by the Chamber of Commerce, my Council has been of opinion that no reason had been shown for extending to vessels which derive the same benefit from the protection of the Breakwater as other ships of the same class trading with Europe or China, rates which had been specially lowered in favour of the small coasting craft, on the ground that before the commencement of the Breakwater these small craft were able to lie in close proximity to the shore and to discharge their cargoes with comparative ease. The benefit derived from the Breakwater by small craft has therefore been small in proportion to that enjoyed by larger ships of greater draught, and I fully concur in the opinion that the charges should bear an equitable proportion to the relative advantages derived by the class of vessel, and that this is the proper basis upon which to frame those charges.

8. Adopting the above conclusions, it is probable that the scale of Port, Tonnage and Warehouse dues, of which I have now to submit a schedule for the sanction of Her Majesty's Government, will produce as follows:—

		Rs.
Port Dues	...	67,801
Tonnage Dues	...	114,031
Wharf and Harbour Dues	...	230,440
	Rs.	412,272

a sum which is but slightly less than the expenditure which the increased dues have to cover, and which has already been stated at Rs. 431,000: and I would request the authority of Her

XV.—1882.

LETTER

FROM

THE HON. THE COLONIAL SECRETARY, CEYLON,

TO

THE HON. THE COLONIAL SECRETARY, QUEENSLAND,

REQUESTING

INFORMATION AS TO THE PROSPECTIVE WELFARE OF SINHALESE EMIGRANTS IN THAT COLONY.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

EMIGRATION TO QUEENSLAND.

The Hon. the COLONIAL SECRETARY, Ceylon, to the Hon. the COLONIAL SECRETARY, Queensland.

Colonial Secretary's Office,
Colombo, 26th September, 1882.

SIR,—I AM directed to invite the attention of the Queensland Government to the fact that the agents in Ceylon of certain employers of labour in your Colony have been recruiting Sinhalese emigrants to proceed to Rockhampton, under engagement to work as agricultural labourers. A copy of the terms offered by the recruiters is hereto annexed.*

Although there is not in Ceylon, as in India, any large superabundant population for the relief of whose necessities the outlet of emigration is specially desirable, there is no wish on the part of this Government to place any unnecessary restrictions on such emigration, which, if properly conducted, may in many ways prove beneficial to the Sinhalese population. It has to be borne in mind, however, that the Sinhalese are not, as a rule, acquainted with the English language, nor qualified for self-protection in a—to them—strange country. It is therefore of great importance that this Government should have full and early information upon the following points :—

(1) Whether the emigration from Ceylon is being organized with the knowledge and approval of the Queensland Government.

(2) Whether the Queensland Government is prepared to extend to the Sinhalese immigrant special protection, under legislative enactment, such as is required by the Government of India in the case of the Indian cooly. It is understood that the assent of the Indian Government to emigration from British India to Queensland is probable, but as Ceylon is not a part of British India, regulations framed for the latter country would not effect the former unless specially extended to it.

(3) Whether the wages offered to Sinhalese immigrants—£20 per annum without food or clothing—suffice to leave a fair margin over and above the actual cost of living.

This question is of much importance, in view of the fact that the Sinhalese labourer will, at the outset, lie in debt to his employer for the amount of the advance made to him before leaving Ceylon ; and, further, that an import duty of 1*d.* per lb., or cent. per cent. *ad valorem* is levied in Queensland upon rice, the staple food of the Sinhalese. Assuming that a Sinhalese consumes on an average one bushel, or 64 lbs. of rice per mensem, the annual food tax levied upon him would amount to £3 4*s.* per annum, or 16 per cent. upon his gross wages.

(4) Whether any preferential claim is, or will be, allowed against a bankrupt estate in favour of labourers' wages overdue. The penalties against non-fulfilment of his engagement by a labourer are, under the Queensland Master and Servants' Act, 25, Victoria No. 11, somewhat severe ; and, on the other hand, ample provision is made for the recovery of wages from the property of the employer, supposing him to be possessed of property, open at the time being to seizure and sale.

But there appear to be not unreasonable grounds for apprehension as to the fate of a Sinhalese labourer engaged to a bankrupt employer, more especially having regard to the fact that there is no obligation upon the part of the employer or the estate to supply the labourer with food and clothing.

There has, until the present occasion, been no emigration from Ceylon, and no legislation has been deemed necessary hitherto to regulate the emigration under engagement of natives from this Island. It is intended, however, to pass during the coming Session of the Legislature an Ordinance giving to the Governor in Executive Council the necessary powers to enable them to deal with the question ; and it will be of great advantage to this Government to be placed, at an early date, in possession of the views of the Queensland Government upon the points as to which I have above, under Governor Sir J. Longden's instructions, requested information.

I am, &c.,
J. DOUGLAS,
Colonial Secretary.

* Not printed.

XVI.—1882.

GRAIN TAX COMMUTATION.

REPORT

ON THE

COMMUTATION SETTLEMENT OF THE SABARAGAMUWA DISTRICT (KURUWITI KÓRALÉ EXCEPTED)

UNDER THE PROVISIONS OF

THE GRAIN TAX ORDINANCE, 1878.

(In continuation of Sessional Paper No. XII. of 1881.*)*

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

GRAIN TAX COMMUTATION.

THE Grain Tax Ordinance was introduced into the District of Sabaragamuwa (excepting the Kuruwiti kóralé, upon which I have already reported) by the Proclamation of the 17th February, 1881.

2. The mode of procedure initiated in the settlement of the Kuruwiti kóralé was continued throughout the district, and the district price of paddy was determined as it was for that kóralé.

3. The new Ordinance having as its main effect a reduction of the amounts of the commuted tax paid previous to its introduction was, of course, favorably received.

4. In Appendix I. I have entered a few notes upon the contents of the appendices which follow.

A. R. DAWSON,
Grain Commissioner.

Kegalla, 4th July, 1882.

APPENDIX.

I.—NOTES.

1. After further inquiry I consider that the tables of dry measure and land measure, upon which the results of my work hitherto have been calculated, are not applicable to the kóralés of Sabaragamuwa. Other tables will be found in Appendix IV. which differ from those previously given (see my report upon the Udugaha Pattuwa of Siyane kóralé) in representing the laha measure as holding four quarts instead of four quarts and four-fifths, and in stating the extent of land generally sown with an amunam of paddy as two acres and a-half instead of three acres. The laha, or kuruni basket, admittedly holds twenty-four handfuls of paddy (atalohu, or single handfuls). Thus it is said that

Two handfuls make an awaliya
Three awali „ a neliya
Four neli „ a laha, or kuruni.

So a neliya is equal to six handfuls, and upon experiment a quart measure will be found to be the same. The awaliya and neliya are measures in name, the only vessel which is in use being the laha. The laha, therefore, should be capable of containing four quarts. The habit of giving this measure different capacities in different places has no honest object, and should be discouraged in all official dealings.

2. The statement in Appendix III. has been carefully prepared, and the probable value of the grain-tax which is remitted has been estimated at the rate over acreage of annual commutation found for the taxed lands of the kóralé in which the exempted lands are situated. The results do not differ much as regards the probable value of tax from those given in the return laid before the Legislative Council (see Sessional Papers of 1878, page 332), but in acreage the difference is noticeable. It is not possible to test the accuracy of the figures given here or in the return by plans of survey, as no plans, excepting those made of temple lands—fields, gardens and waste lands *en bloc*—have been made. 3,940 acres are given in the return as exempted on account of temples, and 2,452 acres on account of loyalty, the value of the tithe being estimated at Rs. 7,114 and Rs. 3,677 respectively.

My figures for temples are 5,377 acres, and on account of loyalty 3,049 acres 30 perches, the probable value of grain tax at one-fourteenth of the produce, the rate which prevails in Sabaragamuwa being estimated at Rs. 6,709·28 for the former and Rs. 3,866·38 for the latter. In 1856 Sir Charles Layard considered that the exemptions affected nearly three-fifths of the arable lands in the district (see letter from the Government Agent of the Western Province to the Colonial Secretary, No. 159 of 18th March, 1856). Since then the Temple Lands Commissioners have rejected many claims, and the lands to which they related have been taxed.

The whole acreage of mud land subject to the payment of grain-tax I find to be 29,660 acres, and the whole acreage for which the tax is permanently remitted 8,427 acres, in all 38,087 acres. The extent exempted then appears to be only two-ninths of the whole. It must be remembered that there is a quantity of rice (el-wi) grown on highlands, temple and other, which my calculations do not affect (nor apparently from the use of the word "arable" did Sir C. Layard intend to include these), and that many lands the property of persons holding office, or who have held office, under the Government are exempted by the Proclamation of 1826.

Roundly, it may be said that for one reason or another one-third of a possible revenue from grain-tax and grain-duty in Sabaragamuwa stands remitted.

3. The work has occupied me for ten months, during which time 64,298 parcels of land were passed in commutation. These parcels were often so absurdly small, that when the time arrives for revising the settlement it may be thought advisable to make assessments field by field instead of share by share. Indeed, I should have resisted on the present occasion the desire of the people for the latter mode had it not been necessary to carry out the new settlement on the lines of agreements which existed. An assessment field by field would be truer and fairer to the landowners, would be more speedily made, and would at length give less difficulty in collection, but at the outset it might give rise to disagreements among co-parceners as to the share of tax to be contributed by each, and would, therefore, be unpopular.

4. The variation in the rates over acreage of annual commutation from Rs. 1·36 in the Kuruwiṭi kóralé to 78 cents in the Kukuḷu kóralé, can be accounted for by the great differences in soil and facilities for cultivation which must lie between a fertile, wealthy and well-cared for division, and a division where the soil is bad, the means of communication difficult, and the cultivators few and poor.

5. There are many fields situated in Nindagam which are subject to payment of rent in personal service to a landlord as well as to payment of grain-tax to the Government.

From the 17th clause of the Service Tenures Ordinance, I gather that it was intended that the tenants of such lands should not bear the double burthen, but in order to relieve them of it, it is necessary that Part III. of the Ordinance should be given effect to, and that a tenant should be enabled to commute his rent. In most cases I found that the tenant paid both grain-tax to the Government, and to his landlord the full value of personal service as found by the Service Tenures' Commissioners.

He had not, however, commuted his service, and could not do so ; and it is not until commutation has been made that the provision in the 17th clause becomes operative.

6. The cultivation of paddy is more remunerative than in the maritime pattu, and is less liable to injury by flood, drought, &c.

Manures are seldom or never used. Here and there a small quantity of cattle-manure is collected and thrown carelessly upon the field, but no serious efforts are made to improve the results of cultivation.

The chief hindrance to improvement is the poverty of the cultivators, the majority of whom live from hand to mouth, a fact which becomes painfully apparent whenever unseasonable weather has interfered with the success of their work. It is difficult to suggest a remedy while the holdings are as small as they are, and while, with the natural growth of the population, they must continue to become smaller. Compulsory application of the Partition Ordinance would be impracticable, and to interfere with their laws of inheritance would be out of the question. The population must increase, and so, then, must the sub-division of the land which it inherits, and the inability in consequence to improve the system of agriculture.

The only hope, I think, lies in co-operation, and how difficult it would be to educate cultivators in that direction those who are acquainted with the economy of village life can understand. Still, an attempt might be made on a small scale in a few selected villages, and no better scene for the experiment could be chosen than Sabaragamuwa.

The kinds of rice which are most generally grown nearer the coast are all in use in this district (see my report upon the Gaṇgaboda Pattuwa, Siyane kóralé). The average yield is about ten-fold. Information of a reliable nature upon this point is difficult to procure. One ratémahatmaya gave me ten-fold as the average for his division, and at the same time told me that the soil was so infertile that it took five bushels of seed to sow an acre. In other divisions it was said that the yield bore a like relation to the quantity of seed sown, but that five bushels of seed sufficed for the cultivation of two acres and a-half.

The market value of an acre of ordinary paddy field is about Rs. 80.

Seed paddy is lent at fifty per cent. interest, payable after the harvest for which it has been used.

On the whole the number of cattle in the district are sufficient for agricultural purposes.

Disease, however, is more prevalent and fatal than of old. Attempts were made at one time to combat this évil and the regulations and orders then issued are, I believe, still enforceable. There can be no doubt that the old customs and habits of cultivators are gradually disappearing, notwithstanding that rules framed under the Paddy Cultivation Ordinance No. 21 of 1867, have been in force for some time. The principal headmen do not take sufficient interest in the matter to make a proper observance of the rules possible. The quantity of paddy raised is not sufficient for the wants of the resident population, about one-sixth of the rice consumed in the villages being imported through Colombo from India.

There are no large irrigation works in the district. The one or two small works constructed by the Government upon the system of reimbursement of cost are useful, though with that at Walalgoda in the Kolonna kóralé the people did not seem to be fully contented. In the improvement of this work, and in granting liberal terms to asweddumizers of Crown land in the Kukulu kórale, there is an opening for some good.

7. In proceeding against defaulters under the 18th clause of the Grain Tax Ordinance, I would suggest that in every instance the crop or produce of the land in default, or moveable property found thereon, should be seized and sold in preference to the land itself, that being looked upon as a last resource ; that seizures and sales should be most carefully made and fully published ; and that sales of land should always be held either in the village or in the gaṇwasama (group of villages in charge of a gaṇ-arachchi) in which the land lies. In many cases the purchasers at these sales and the defaulters come to a settlement, it being understood for a consideration that the sale is annulled, although annulment is seldom or never formally made, and in order not to hinder such arrangements it is desirable that the certificate of sale, described in the 22nd clause of the Ordinance, should not be issued until several months—at least six—after the sale has taken place, and then only after some enquiry has been made as to whether cancellation by agreement is likely to happen.

I would also point out that it is undesirable to issue more than one receipt for each entry in the register, no matter how many owners the entry exhibits.

II.

RESULTS OF WORK.

Kóralé.	Number of lots.	Extent taxed at one-half of produce.	Extent taxed at one-fourth of produce.	Extent taxed at one-fifth of produce.	Extent taxed at one-tenth of produce.	Extent taxed at one-fourteenth of produce.	Total extent by native sowing measure.	Total extent by acreage.	Average revenue derived from grain taxes during last 14 years.	Annual Commutation fixed under Grain Tax Ordinance.	Rate of Annual Commutation over acreage.
		A. P. K.	A. P. K.	A. P. K.	A. P. K.	A. P. K	A. P. K.	A. R. P.	Rs. cts.	Rs. cts.	Rs. cts.
Kuruwiṭi Kóralé	13652	—	—	0 2 0	—	2083 2 9	2084 0 9	5210 2 10	7143 13	7101 80	1 36
Nawadun „	16047	—	—	—	23 3 1	2131 3 5	2155 2 6	5389 0 20	7682 30	6496 5	1 20
Kukulu „	4510	0 1 6	6 1 3	2 1 8	0 1 8	819 1 4	828 3 9	2072 1 30	1305 26	1616 85	0 78
Aṭakalan „	8447	—	—	—	1 1 0	1378 0 5	1379 1 5	3448 1 30	4572 53	4202 25	1 21
Kolonna „	9679	—	—	—	—	1255 0 6	1255 0 6	3137 3 20	3661 95	4029 71	1 28
Meda „	7865	—	3 3 0	1 1 0	316 1 7	1880 2 0	2201 3 7	5504 3 10	7333 63	6907 49	1 25
Kaḍawaṭu „	4098	—	—	—	839 2 3	1119 0 5	1958 2 8	4896 3 0	6403 74	5783 43	1 30
Total ...	64298	0 1 6	10 0 3	4 0 8	1181 1 9	10667 3 4	11864 0 0	29660 0 0	38102 54	36137 58	1 21

III.

STATEMENT showing extent of lands exempted from payment of Grain-tax, with probable value of the exemption.

Kóralé.	Exempted from Grain-tax as property of Buddhist Temples.			Exempted from Grain-tax as account of loyal conduct.			Total Acreage.	Total probable value of Grain-tax.
	Native sowing measure.	Acreage.	Probable value of Grain-tax.	Native sowing measure.	Acreage.	Probable value of Grain-tax.		
	A. P. K.	A. R. P.	Rs. cts.	A. P. K.	A. R. P.	Rs. cts.	A. R. P.	Rs. cts.
Kuruwiṭi Kóralé	438 2 2	1,096 1 20	1,491 5	39 2 8	99 1 0	134 98	1,195 2 20	1,626 3
Nawadun „	422 3 1	1,056 3 30	1,268 33	235 2 0	588 3 0	706 50	1,645 2 30	1,974 83
Kukulu „	113 0 4	282 3 0	220 53	—	—	—	282 3 0	220 53
Aṭakalan „	258 2 3	646 1 30	782 19	92 2 6	231 2 20	280 26	878 0 10	1,062 45
Kolonna „	68 3 4	172 0 20	220 31	—	—	—	172 0 20	220 31
Meda „	265 1 1	663 0 30	828 98	190 0 7	475 1 30	594 29	1,138 2 20	1,423 27
Kaḍawaṭu „	583 3 9	1,459 3 30	1,897 89	661 2 6	1,654 0 20	2,150 35	3,114 0 10	4,048 24
Total ...	2,151 0 4	5,377 3 0	6,709 28	1,219 2 7	3,049 0 30	3,866 38	8,426 3 30	10,575 66

IV.

DRY AND LAND MEASURES.

DRY MEASURE.

1 Amunam	=	4	péḷas
	=	40	lahas or kurunis
	=	8	parrahs
	=	5	bushels
	=	20	pecks
	=	160	quarts or seers or nęli
1 péḷa	=	10	lahas or kurunis
	=	2	parrahs
	=	1¼	bushels
	=	5	pecks
	=	40	quarts or seers or nęli
1 laha	=	4	quarts or seers or nęli
1 parrah	=	5	lahas or kurunis
	=	20	quarts or seers or nęli

LAND MEASURE.

1 amunam's sowing extent	=	2½	acres
1 pęla's ,, ,,	=	2	roods 20 perches
1 laha's or kuruni's ,,	=	10	perches
1 parrah's ,, ,,	=	1	rood 10 perches
1 bushel's ,, ,,	=	2	roods
1 peck's ,, ,,	=	20	perches
1 quart's or seer's ,,	=	2½	perches

A. R. DAWSON,
Grain Commissioner.

XVII.—1882.

POST OFFICE SAVINGS BANK BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to grant facilities for depositing small Savings at Interest."

Ordered by the Legislative Council to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

EXTRACT from the Minutes of the Legislative Council, dated 4th October, 1882.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled :

"An Ordinance to grant facilities for depositing small Savings at Interest."

The Hon. J. DOUGLAS, C.M.G., Colonial Secretary,
The Hon. W. D. WRIGHT, Acting Treasurer,
The Hon. W. HALLILEY, Acting Principal Collector of Customs,
The Hon. P. RÁMA-NÁTHAN, }
The Hon. F. M. MACKWOOD, } Unofficial Members.
The Hon. A. L. DE ALWIS, }

POST OFFICE SAVINGS BANK BILL.

REPORT.

THE Sub-Committee appointed by the Legislative Council to consider the draft of "An Ordinance to grant facilities for depositing small savings at interest" have carefully examined the provisions of the Ordinance, and also those of the regulations which have been prepared by the Postmaster-General for adoption under the powers conferred by the fourth clause.

And we recommend the Ordinance for the sanction of the Legislative Council.

J. DOUGLAS.
W. D. WRIGHT.
W. HALLILEY.
P. RA'MA-NA'THAN.
F. M. MACKWOOD.
A. L. DE ALWIS.

Legislative Council Chamber,
Colombo, 11th October, 1882.

XVIII.—1882.

CORRESPONDENCE

ON THE SUBJECT OF

THE ENCROACHMENT OF THE SEA UPON THE SEA-BEACH AT MUTWAL.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

MUTWAL SEA-BEACH.

No. 1.

The Director of Public Works to the Hon. the Colonial Secretary.

No. 1,344. Colombo, 9th August, 1882.

Sir,—With reference to your letter No. 907 of the 17th June last, and other correspondence upon the subject of the inroads of the sea upon the sea-beach at Mutwal, I have the honor to inform you that this encroachment is extending, and that the whole of the Rs. 3,000 sanctioned by above letter has been expended in forming a breakwater for the protection of the road, and further works are still necessary.

2. Some houses have been undermined, and the sea is now encroaching at a point of the road near where the road branches off to the Cathedral. The sand scouted from this portion of the beach seems to be deposited further on along the coast near the St. John's Warehouse; and as it is desirable that some permanent work should be undertaken to stop this scouring action along the shore, I would beg to suggest that the Breakwater Engineer, the Master Attendant, and myself should be appointed to report upon this question and suggest such works as are required.

I am, &c.,
J. F. CHURCHILL,
Acting Director of Public Works.

No. 2.

The Hon. the Colonial Secretary to the Director of Public Works, the Resident Engineer, Breakwater Works, and the Master Attendant.

Colombo, 17th August 1882.

Gentlemen,—I am directed to transmit to you the annexed extract from a letter from the Director of Public Works, and to state that the Governor has been pleased to appoint you a Committee to consider and report upon the causes of the erosion of the shore, and the best means of remedying it.

2. The extent to which the foreshore of the Harbour in front of Sea-street is affected by the movement of the sand should also be reported.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

No. 3.

The Director of Public Works, the Resident Engineer, Breakwater Works, and the Master Attendant to the Hon. the Colonial Secretary.

Colombo, (8th) 12th September, 1882.

Sir,—With reference to your letter of the 17th ultimo, we have the honor to report that we are of opinion that the erosion of the shore of the Colombo Harbour is caused by the unusual prevalence for some years of northerly and westerly winds. The same force has been at work and the same scour has taken place at various points along the line of the western coast of Ceylon. In August, 1880, we were appointed a Committee to report on an extensive erosion of the foreshore near Kalutara, which we found was owing to the same cause.

2. The best mode of protecting the foreshore of the Colombo Harbour near Mutwal is to form a rubble embankment along it to act as a breakwater and resist the scouring action of the waves.

3. We annex a plan of Colombo Harbour showing the extent to which the foreshore has been affected, and also the progress made with the Breakwater in each year.

4. In the years 1877 to 1879 there was a scour in the Harbour, as shown coloured in brown: this did considerable damage, washing away a portion of St. John's Warehouse and Messrs. Armitage's saw-mills, near St. Anthony's church.

5. As the Breakwater was extended and gave protection to this portion of the shore from 1880, the sand has redeposited, and the line of foreshore as it now stands is coloured in green on the plan.

6. The portion coloured red shows the erosion that has taken place from 1880 to the present time towards Mutwal, and which portion of the shore would require to be protected by a rubble embankment to prevent further erosion by the sea.

We have, &c.,
J. F. CHURCHILL,
Acting Director of Public Works.
JOHN KYLE,
Resident Engineer, Harbour Works.
J. DONNAN,
Master Attendant.

No. 4.

The Hon. the COLONIAL SECRETARY to the RESIDENT ENGINEER, Breakwater Works.

No. 141. Colombo, 18th September, 1882.

SIR,—I AM directed to transmit to you the enclosed letter from Messrs. Churchill, and Kyle, and Captain Donnan, and I am to request you to submit an estimate of the cost of the work suggested in the second paragraph thereof, the stone required being supplied from Mahara.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

No. 5.

The RESIDENT ENGINEER, Breakwater Works, to the Hon. the COLONIAL SECRETARY.

No. 139. Colombo Harbour Works,
21st September, 1882.

SIR,—IN reply to your letter No. 141—with enclosures herewith returned—I have the honor to state that the black dotted line shown along the shore on the plan from near St. Anthony's Church to Mutwal point is as near as possible the line in which the rubble embankment should be deposited to act as a breakwater to resist the present scouring action of the waves.

2. The length of this work is over one mile, and I would estimate, approximately, if supplied of Mahara rubble, that the work will cost Rs. 17,000.

3. I would recommend that, excepting such work as is absolutely necessary to protect the roads or Government property, any work of this description be delayed until the completion of the S. W. monsoon arm of the Breakwater.

I am, &c.,
JOHN KYLE,
Resident Engineer.

No. 6.

The DIRECTOR OF PUBLIC WORKS to the Hon. the COLONIAL SECRETARY.

No. 1,531. Colombo, 12th September, 1882.

SIR,—WITH reference to my letter No. 1,344 of the 9th ultimo, and previous correspondence upon the subject of the damage done to the Mutwal road by the encroachment of the sea, I have the honor to forward an estimate for Rs. 4,572 to provide for the protection of the road, and for the upkeep of the whole length of the road from the Town Hall to the Mattakkuliya ferry to the end of the year.

2. The original estimate for the upkeep of this road, No. 58, was for Rs. 4,925, then a supplementary estimate (551) for Rs. 3,000 was sanctioned, and the annexed return shows that out of these two estimates a sum of Rs. 6,365·46 was expended in works of protection to prevent the road being washed away by the sea at Mutwal.

3. I have therefore to request that the enclosed estimate for Rs. 4,572 may be sanctioned. Rs. 2,500 of this amount is for further works for the protection of the road from the encroachment of the sea at Mutwal, and the other Rs. 2,072 are required for the maintenance and upkeep of the whole length of the road, to make up for what was expended upon those works of protection at Mutwal, and charged to the original estimate, which charges were not anticipated when the estimate was framed.

4. This estimate for Rs. 4,572 might be voted in the Supplementary Supply Bill for this year, to be charged to the anticipated saving of Rs. 40,000 to be made on the upkeep votes for all the roads for this year.

I am, &c.,
J. F. CHURCHILL,
Acting Director of Public Works.

STATEMENT showing Details of Expenditure on Estimates Nos. 58 and 551 of 1882, as referred to in paragraph No. 2, letter No. 44, of the Superintending Officer, Trunk Road, dated 28th August, 1882, to Provincial Assistant Western Province.

No. of Estimate.	Amount.	Expenditure on Temporary Wall opposite Uplands.					Upkeep.				
		Cost of Rubble.	Transport of rubble from quarry to site.	Labour loading & discharging rubble and for driving piles, &c.	Cost of Timber, Posts, Bamboos, and Rough slabs.	Total.	Repair to road-surface.	Drainage.	Metal and gravel.	Contingencies, materials, &c.	Total.
	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.
58/82	4925 0	2687 0	163 87	289 67	599 82	3740 36	215 71	122 8	644 62	201 84	1184 25
551/82	3000 0	2037 98	192 44	221 38	173 30	2625 10	152 18	5 44	5 10	96 54	259 26
	7925 0	4724 98	356 31	511 5	773 12	6365 46	367 89	127 52	649 72	298 38	1443 51

ABSTRACT.

	Cost of rubble walling.	Cost of upkeep.	Total.
	Rs. cts.	Rs. cts.	Rs. cts.
Estimate No. 58 of 1882 ...	3740 36	1184 25	4924 61
Do. 551 „ ...	2625 10	259 26	2884 36
Rs.	6365 46	1443 51	7808 97

XIX.—1882.

COLOMBO HARBOUR WORKS.

CORRESPONDENCE

RELATING TO

THE DREDGING OF THE COLOMBO HARBOUR.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

DREDGING OF THE COLOMBO HARBOUR.

No. 1.

The MASTER ATTENDANT, Colombo, to the Hon. the COLONIAL SECRETARY.

No. 151.

Master Attendant's Office,
Colombo, 26th August, 1882.

SIR,—I HAVE the honor to report that the dredging of the Harbour is not being done deep enough. There have been vessels in port drawing 25 feet and 25 feet 6 inches, and to provide for that draught there should not be less than a uniform depth of 27 feet at low-water over the area dredged.

I am, &c.,
J. DONNAN,
Master Attendant.

No. 2.

Report by the RESIDENT ENGINEER, Breakwater Works, upon the MASTER ATTENDANT'S letter No. 151 of 26th August, 1882.

THE mean depth of the Suez Canal is 26 feet, and I do not think Colombo requires more at present. I would suggest, however, the advisability of keeping the deep water berths for vessels drawing the depths of 25 and 25½ feet water. Next season there will be ample water for vessels drawing more water than the Suez Canal will admit.

JOHN KYLE,
Resident Engineer.

Colombo Harbour Works,
30th August, 1882.

No. 3.

The Hon. the COLONIAL SECRETARY to the MASTER ATTENDANT, Colombo.

No. 172.

Colonial Secretary's Office,
Colombo, 2nd September, 1882.

SIR,—WITH reference to your letter of the 26th ultimo, No. 151, I am directed to forward for your information the annexed copy of a report by the Resident Engineer of the Breakwater Works.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

No. 4.

The MASTER ATTENDANT, Colombo, to the Hon. the COLONIAL SECRETARY.

No. 156.

Master Attendant's Office,
Colombo, 5th September, 1882.

SIR,—IN reply to your letter No. 172 of the 2nd instant, I have the honor to state that even when the Breakwater shall be finished, the Harbour will not be so large as to afford two or three of the outer berths being reserved for heavy-draughted vessels. Besides, Captain Bailey has given the maximum draught of the P. & O. vessels as 25 feet 5 inches, and they require to be berthed in the innermost berths; 26 feet is therefore not a safe margin, and if the Harbour is not now dredged to 27 feet at low-water, it will have to be done hereafter, and I believe it would be less expense, and cause less inconvenience, to take it down to that depth at once.

I am, &c.,
J. DONNAN,
Master Attendant.

No. 5.

The Hon. the COLONIAL SECRETARY to the RESIDENT ENGINEER, Breakwater Works.

No. 139.

Colonial Secretary's Office,
Colombo, 11th September, 1882.

SIR,—WITH reference to your report of the 30th ultimo, I am directed to transmit to you the accompanying letter received from the Master Attendant, Colombo, and I am to request you to report to me what the extra dredging will cost.

I am also to request you to furnish me with a plan showing the berths that will be available for ships drawing over 25 feet of water.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

No. 6.

The RESIDENT ENGINEER, Breakwater Works, to the Hon. the COLONIAL SECRETARY.

No. 133.

Colombo Harbour Works,
12th September, 1882.

SIR,—IN reply to your letter No. 139 of the 11th instant, with an enclosure from the Master Attendant, herewith returned, I have the honor to state that the trace which accompanied my letter of the 29th May, 1882, gave the information now asked for as regards the water now available in the Harbour for vessels drawing over 25 feet water. The skeleton trace appended to this letter shows the situation of the mooring buoys with regard to the breakwater, and the 25 and 26 feet depth contour line as now set out. At the outer or breakwater tier there is accommodation at the buoys for four ships, and within the intermediate spaces additional accommodation for four more drawing over 25 feet water. Next season there will be (weather permitting and casualties excepted) increased accommodation for four outside the contour line shown on trace.

2. I have also to state that to dredge an additional foot throughout the proposed deep water area will cost Rs. 307,200.

I am, &c.,
JOHN KYLE,
Resident Engineer.

No. 7.

The Hon. the COLONIAL SECRETARY to the MASTER ATTENDANT, Colombo.

No. 178.

Colonial Secretary's Office,
Colombo, 19th September, 1882.

SIR,—WITH reference to your letter No. 156 of the 5th instant, I am directed to transmit to you the enclosed copy of a letter from the Resident Engineer, Breakwater Works, together with the skeleton tracing therein referred to.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

XX.—1882.

DESPATCHES

TO AND FROM

THE RIGHT HON. THE SECRETARY OF STATE

RELATIVE TO

THE DISTRICT JUDGESHIPS OF COLOMBO AND KANDY.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

DISTRICT JUDGESHIPS OF COLOMBO AND KANDY.

No. 1.

Governor Sir J.R. LONGDEN, K.C.M.G., to the Right Hon. the SECRETARY OF STATE for the Colonies.

No. 403.—*Miscellaneous.*

Queen's House,
Colombo, 17th October, 1879.

SIR,—I HAVE the honor to submit for your consideration the accompanying application from Mr. Walter Wragg, District Judge of Chilaw, and lately acting as District Judge of Kurunégala, praying that you will be pleased to give him promotion out of Ceylon whenever a suitable judicial appointment may become vacant.

2. Mr. Wragg, who graduated with honors as a Bachelor of Arts of Oxford in 1867, was appointed a Writer in January, 1868, and in the same year was sent to act temporarily as a Magistrate at Hárispattu. He was subsequently employed for a short time in revenue duties, but since January, 1871, he has been exclusively employed as Police Magistrate or District Judge. He has taken pains to qualify himself for his judicial duties, both by the study of the two native languages (in both of which he has passed), and also by the study of law. For the latter purpose he has twice visited England, employing his leisure in legal studies; and he was called to the Bar at the Inner Temple in January last.

3. Mr. Wragg expresses his regret that by the "strict adherence" of this Government to the instructions of the Secretary of State given in Mr. Gillman's case, he is precluded from obtaining even the acting appointment of District Judge of Colombo or Kandy, and that there is no hope left for the attainment of the higher judicial appointments in the service, notwithstanding the care with which he has endeavoured to qualify himself for judicial duties, and therefore he prays for promotion to a judicial office out of Ceylon.

4. As regards Mr. Wragg personally, I desire to recommend his request to your favourable consideration. He has taken great pains and been at some expense to educate himself for judicial work, and he cannot look forward to any high promotion in the Judicial Branch of the Service; while the very fact that he is an excellent District Judge will probably lead to his continued employment in that Branch, and his practical exclusion from the Revenue Branch.

5. But there is a more general side to the question, which I take the liberty of laying before you, in connection with the strictures of the late Chief Justice, Sir John Phear, upon the administration of justice in Ceylon. In a letter addressed to the Government in May, 1878,* Sir John Phear animadverted in strong terms upon the want of legal training upon the part of the District Judges and Magistrates of the Colony, and upon the evils which he believed to be created by this want. Without endorsing Sir John Phear's strictures, I may admit that a sound knowledge of law would be of great use in the more important judicial offices, such as the District Judgeships of Galle, Jaffna and other places. The necessity of a professional training has already been admitted in the case of Kandy and Colombo, and these offices were taken out of the Civil Service in order that they might be conferred upon practising barristers selected by the Secretary of State in England. I do not desire to undervalue the advantages which even a restricted practice at the English Bar gives to a barrister, but it appears to me that in the case of an officer in the Ceylon Service, with equal professional training, followed by a call to the Bar in England, long experience in the administration of justice in the inferior Courts, a knowledge of the native languages, and a familiarity with native habits and customs might present advantages equal to those looked for in the practice of an English barrister, and I would venture to suggest whether the time has not arrived when the existing regulations for filling the District Judgeships of Colombo and Kandy might not be properly relaxed in favour of Civil Servants, who, like Mr. Wragg, have qualified themselves for judicial office by study, and have been called to the Bar.

6. At present, the object of almost all the officers in the Civil Service is to obtain employment in the Revenue rather than in the Judicial Branch of the service, and this must always be so under the present state of things, for while in the Judicial Branch of the service there are only two District Judgeships of over £1,000 a year open to the service, there are in the Revenue Branch seven Government Agencies of Provinces, and three other posts, all at salaries of over £1,000 a year, and of higher rank than any of the District Judgeships. The result is that, as a rule, the more able, the more energetic, and the best working men are to be found in the Revenue Branch. The very rule of the service which declares all officers in the Civil Service eligible to succeed to the important situations, but imposes upon the Governor the duty of selecting the "most competent man whom the service may offer" for any vacant office, necessarily produces this result, and it was not altogether without grounds that the late Chief Justice once complained to me that most of the really able men in the service were to be found in the Revenue and not in the Judicial Branch.

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* Enclosed in my despatch No. 243 dated 20th July, 1878.

7. In laying these considerations before you, I have no desire to suggest that the District Judgeships of Colombo and Kandy should be filled otherwise than by barristers, called to the Bar in England, and having the necessary legal training. I should, indeed, be glad if other important judicial posts, such as the District Judgeships of Galle and Jaffna, were filled by barristers; but all that I would at present suggest is, that if the necessary legal qualifications can be found within the ranks of the Ceylon Civil Service, the mere fact of being in that service should not of itself exclude a competent judicial officer, being a barrister, from promotion to be District Judge of Kandy or Colombo. I believe that if this were conceded, an inducement would be held out to the younger members of the Civil Service to take up the study of the law with the view to being called to the Bar in England, as Mr. Wragg has done, and the Government would thus have at their command, for the more important judicial offices, the services of competent professional barristers.

I have, &c.,
J. R. LONGDEN.

Enclosure.

Mr. WRAGG to the Right Hon. the SECRETARY OF STATE for the Colonies.

The District Court, Kurunégala,
Ceylon, 4th October, 1879.

SIR,—I HAVE the honor to state that I became a member of the Inner Temple in 1866, and that I was one of four who obtained a first-class in Law at Oxford, where I was Scholar of my College; at the Trinity Term Examination of 1867. Having taken my Degree, I proceeded to Ceylon in the beginning of 1868. During my 11½ years' service there, I have sat on the bench as Magistrate and Judge for more than ten years. After two journeys to England for the purpose of completing the prescribed twelve terms, I was called to the Bar at the Inner Temple in January, 1879. Having made law my special study, and having incurred considerable expense in connection with such study at the University, at the Inner Temple and elsewhere, I now find, with great regret, that a strict adherence by the Ceylon Government to the ruling of the Secretary of State for the Colonies in 1872, concerning Mr. Gillman's appointment to the Kandy District Court Bench, is the obstacle to my obtaining even the acting appointment of District Judge at Colombo and Kandy: as vacancies (in the Senior and Junior Puisne Judgeships) on the Supreme Court Bench are filled up from the Colombo or Kandy Bench, the denial of the latter appointments totally disables me from rising to the higher judicial appointments. In Ceylon, therefore, my judicial qualifications confer no benefit upon me in the legal branch of the service, while, to a great extent, they are prejudicial to advancement in the Revenue Branch of the service. * * * Feeling that there is no judicial career open to me in Ceylon, and that there is no hope for the attainment of positions to which an honorable ambition might lead me, as it does lead members of the Indian Civil Service, I beg that my case may be considered, and that, if I am still to be held ineligible for the Colombo and Kandy Benches, you will be pleased to give me promotion out of Ceylon as soon as a suitable judicial appointment may become vacant.

I am, &c.,
WALTER WRAGG.

No. 2.

The Right Hon. the SECRETARY OF STATE for the Colonies to Governor SIR J. R. LONGDEN, K.C.M.G.

No. 387.—*Ceylon.* Downing-street, 18th December, 1879.

SIR,—I HAVE the honor to acknowledge the receipt of your despatch No. 403 of the 17th October, forwarding a memorial from Mr. Wragg, in which he applies for judicial promotion out of Ceylon on the ground that he is debarred from the higher judicial posts in the Colony by the decision which was given in the case of Mr. Gillman.

2. I am not disposed to alter the general rule laid down by Lord Kimberley in favour of the selection of practising barristers for high judicial office. This rule, however, like others, may admit of special exceptions, as there may occasionally be officers whose efficiency in the minor judicial posts would justify their being considered eligible in cases of vacancies in the higher judicial appointments.

3. Mr. Wragg, therefore, will not be debarred from applying for any such vacancy when it arises; but he should understand that though I have remarked with pleasure the testimony which you have borne to his ability as a District Judge, I cannot now undertake to form any opinion as to his position or comparative fitness for the Judgeship of the Colombo or Kandy Court. or of the Supreme Court of another Colony.

I will, however, note his desire for judicial employment out of Ceylon, as well as within the Island, and if any vacancy occurs in one of the higher judicial offices within the Colony, and he becomes a candidate for it, I shall be willing to consider whether his qualifications are in all respects such as to justify an exception being made in his favour to the general rule, which, as I have said, I do not propose to reverse.

I have, &c.,
M. E. HICKS-BEACH.

XXI.—1882.

COLOMBO HARBOUR WORKS.

STATEMENTS

REGARDING

THE VALUE OF WORK DONE TO DATE, AND THE ESTIMATED COST OF THE ADDITIONAL WORK NECESSARY TO COMPLETE THE IMPROVEMENTS TO THE COLOMBO HARBOUR.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

COLOMBO BREAKWATER.

No. 1.

The Resident Engineer, Colombo Harbour Works, to the Hon. the Colonial Secretary.

No. 148. Colombo Harbour Works,
9th October, 1882.

Sir,—I have the honor to lay before you the following carefully-revised statements of the actual value of work done, and the estimated value of the work still necessary to complete the S.W. Breakwater arm and the dredging, in accordance with the latest design submitted by Sir John Coode, for your information and guidance in Council.

2. The total expenditure upon the S.W. arm and dredging already done up to 31st August, 1882, was Rs. 6,506,128.

3. Based upon the actual cost of work for two previous years, I estimate the additional expenditure necessary to complete the block-setting on the sloping bond principle to the commencement of the pier-head and lighthouse works will be Rs. 512,790.

4. To complete the pier-head and lighthouse, as per Sir John Coode's new design now before me, including completion of dredging, extra moorings now ordered, leading lights also ordered, Master Attendant's new boat-house on the root-work now in hand, and the additional reclamation ground also in hand, I estimate the cost at Rs. 639,723. This sum includes a charge of £1,700, which it is proposed to transfer to the Breakwater account for a new first-order light in the Fort.

5. Administration charges to 31st December, 1884, being a period of seven months to clear up accounts and disperse the staff, &c., including their passages home, I estimate at Rs. 37,000.

6. And, lastly, contingencies at the rate of 10 per cent. on all work to be done and expenditure to be made from September, 1882, equal to Rs. 118,951, making the grand total estimated for a completed S.W. arm and dredging, &c., Rs. 7,814,592.

7. I calculate the equivalent in sterling of this sum as follows :—The loans raised to date, viz., £334,425, realized Rs. 3,807,475 ; the amount expended and estimated to be expended beyond that sum is Rs. 4,007,117, which, assuming the rate at which future loans will be raised to be 1*s.* 8*d.* per rupee, will require a further sum of £333,926, or a total in sterling for the S.W. arm of £668,351.

8. Deducting this sum from the £800,000 allowed by the Legislative Council for a complete harbour, there remains by estimate the sum of £131,649 available for a North arm.

9. The data upon which Sir John Coode based his estimates were taken from figures supplied by me from my actual cost accounts up to December, 1878, and it is subsequent to this date that the saving of £131,649 has been effected upon the works ; and, further, I believe that the Consulting Engineer has not been called upon to make out any further estimates since the cost of work was reduced.

I am, &c.,
JOHN KYLE,
Resident Engineer.

No. 2.

The Hon. the Colonial Secretary to the Resident Engineer, Colombo Harbour Works.

No. 161. Colonial Secretary's Office,
Colombo, 14th October, 1882.

Sir,—With reference to your letter No. 148 of the 9th instant, I am directed to enquire if you are aware whether the estimate submitted by Sir John Coode last year in his letter of 31st March, 1881, as the probable cost of a North arm, viz., £198,046, is founded on the figures supplied by you previous to December, 1878, which figures appear, from the 9th paragraph of your letter, to be in excess of the present actual cost of work, and whether, therefore, the cost of the North arm may be expected to be less than £198,046, or whether, considering the statement made in paragraph 22 of Sir John Coode's report showing that he was then aware of the reduced cost of work, the estimate of £198,046 is based on such reduced cost, and not, therefore, capable of reduction?

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

No. 3.

The Resident Engineer, Colombo Harbour Works, to the Hon. the Colonial Secretary.

No. 155.

Colombo Harbour Works,
17th October, 1882.

Sir,—In reply to your letter No. 161 dated 14th instant, I have the honor to state that Sir J. Coode's estimate of £198,046 for the North arm was presumably based on the cost of work for 1877 and 1878 supplied to him by me.

2. When in England in the early part of 1881, in conversation with Sir John Coode, I found that he had estimated and taken to account a saving of about £50,000 on the works for season 1880-81, in consequence of the great progress made with the block-setting. There has since been a large saving in the season 1881-82, and there will probably be a further amount saved before the S.W. arm is completed, as shown in my letter to you, No. 148 of 9th instant.

3. The cost of production of rubble has been reduced 20 per cent. since Sir J. Coode made his latest estimate, and this will, therefore, decrease the cost of the North arm to a very considerable extent.

I am, &c.,

JOHN KYLE,
Resident Engineer.

XXII.—1882.

NEW LUNATIC ASYLUM COMMISSION.

REPORT.

REPORT of the COMMISSIONERS appointed to "enquire and report *(a)* How many patients can be accommodated in the buildings at the new Lunatic Asylum already completed or under construction, and *(b)* What temporary modifications of the plans or additions thereto are desirable in order to accommodate the greatest number of patients in the buildings?"

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

LETTER FORWARDING COMMISSION.

Colonial Secretary's Office,
Colombo, 22nd. November, 1881.

GENTLEMEN,—I AM directed to transmit to you the accompanying Commission appointing you to be Commissioners to enquire and report how many patients can be accommodated in the buildings at the new Lunatic Asylum already completed or under construction, and what temporary modifications of the plans or additions thereto are desirable in order to accommodate the greatest number of patients in those buildings.

I am, &c.,

GEO. T. M. O'BRIEN,
for Colonial Secretary.

The Hon. the AUDITOR-GENERAL,
The Hon. W. W. MITCHELL,
The DIRECTOR OF PUBLIC WORKS,
The PRINCIPAL CIVIL MEDICAL OFFICER, AND
INSPECTOR-GENERAL OF HOSPITALS.
The PRINCIPAL of the Ceylon Medical College.

COMMISSION.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith.

By His Excellency Sir JAMES ROBERT LONGDEN, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Governor and Commander-in-Chief in and over the Island of Ceylon, with the Dependencies thereof.

J. R. LONGDEN.

To the Hon. WILLIAM HENRY RAVENSCROFT, Auditor-General and Member of Our Executive and Legislative Councils; the Hon. WILLIAM WILSON MITCHELL, Member of Our Legislative Council; JOHN FLEMMING CHURCHILL, Esquire, Acting Director of Public Works; Dr. JAMES LOOS, M.D., Acting Principal Civil Medical Officer and Inspector-General of Hospitals; Dr. JULIAN LEWIS VANDERSTRAATEN, M.D., Principal of the Ceylon Medical College.

WHEREAS We deem it expedient to nominate, constitute, and appoint certain persons to be Commissioners to enquire into and report on the accommodation that is at present provided for patients in the buildings at the new Lunatic Asylum:

Now Know Ye that We, reposing great trust and confidence in your prudence, ability, and fidelity, have nominated, constituted, and appointed, and by these presents do nominate, constitute, and appoint you, William Henry Ravenscroft, William Wilson Mitchell, John Flemming Churchill, James Loos, and Julian Lewis Vanderstraaten, to be Our Commissioners as aforesaid.

AND We do hereby authorize and empower you, Our said Commissioners, to make all necessary inquiries into the said matter and to report—

(*a*) How many patients can be accommodated in the buildings at the new Lunatic Asylum already completed or under construction, and

(*b*) What temporary modifications of the plans or additions thereto are desirable in order to accommodate the greatest number of patients in those buildings.

AND We do hereby authorize and empower you, Our said Commissioners, to exercise for the purpose of carrying on the said inquiry the powers given to Commissioners appointed by Us under the provisions of the Ordinance No. 9 of 1872, entitled "An Ordinance to empower Commissioners appointed by the Governor to inquire into any matter referred to them for inquiry to hear evidence thereon."

AND We do hereby command and require you to report to Us under your hands, within three months, upon the matters referred to you as aforesaid.

GIVEN at Colombo, in the said Island of Ceylon, this Nineteenth day of November, in the year of Our Lord One thousand Eight hundred and Eighty-one.

By His Excellency's command,

J. DOUGLAS,
Colonial Secretary.

NEW LUNATIC ASYLUM COMMISSION.

PROCEEDINGS.

29th November, 1881.

PRESENT:

The Hon. W. H. RAVENSCROFT, | Dr. LOOS,
The Hon. W. W. MITCHELL, | Dr. VANDERSTRAATEN.

Read Commission and decided on course of action.

Resolved to meet at the Asylum at 7 A.M. on 1st December. Dr. Plaxton to be summoned to attend.

Resolved to request the Director of Public Works to examine the grounds around the Asylum and ascertain and report the depth at which the water is now lying after yesterday's rain, and whether all the surface water can be drained off by surface drains into a field at some distance, and what is the distance to which foul water can be conveyed by surface drains. (*Vide* Appendix No. 1.)

Adjourned to Thursday, the 1st December, at 7 A.M., at the Lunatic Asylum, Borella.

Borella, 1st December, 1881.

PRESENT:

The Hon. W. H. RAVENSCROFT, | J. F. CHURCHILL, Esq.,
The Hon. W. W. MITCHELL, | Dr. LOOS,
Dr. VANDERSTRAATEN.

Received Report of Director of Public Works on the question of drainage. (*Vide* Appendix No. 2.)

Visited and inspected the wards and offices of the Borella Lunatic Asylum in company with Dr. Plaxton, the Superintendent.

Proceeded to examine Dr. Plaxton.

Q. Do you consider that the classification given by you in your report, made to the Principal Civil Medical Officer, and dated April 30, 1880, as generally essential to the proper conduct of a lunatic asylum, must be carried out in the new Colombo Lunatic Asylum?

A. I think any smaller number of classes is a distinct disadvantage, but I do not consider it necessary, from a medical point of view, to provide separate accommodation for criminal lunatics. The statement of percentage of each class, given by me in my letter quoted, refers to England, and is not applicable in its entirety to Ceylon. I will furnish to the Commission a statement of the percentage of patients in each class that, in my opinion, should be provided for in Ceylon.

Adjourned till Tuesday, the 6th December, at 7 A.M., at the new Lunatic Asylum, Cinnamon Gardens.

Resolved to request the Colonial Secretary to furnish, for the information of the Commissioners, any observations or reports by the Commissioners of Lunacy in England that have been received by the Government of Ceylon on the subject of the plans of the new Lunatic Asylum now under construction. (*Vide* Appendix No. 3.)

New Lunatic Asylum, Cinnamon Gardens, 6th December, 1881, 7 a.m.

PRESENT: All the Members.

Considered the statements furnished by Dr. Plaxton relative to the subject of the classification of patients in the Ceylon Lunatic Asylum and the number of each class. (*Vide* Appendices Nos. 4 and 5.)

Examination of Dr. Plaxton continued.

Q. Do you consider that, in the event of the male patients being removed from Borella to the new Asylum, it would be necessary that the Superintendent should also move?

A. I consider that it would be most inadvisable that the Superintendent should reside away from the immediate vicinity of the male patients. In the first place, they comprise the greater number of patients—about two-thirds of the whole,—and amongst the males are by far the greater number of cases requiring special attention. Nearly all the cases of determined violence are amongst the males. I do not consider that the same objection to the Superintendent living away from the vicinity of the female patients exists. They may with safety be left in charge of the House Surgeon, if visited daily by the Superintendent.

Q. What percentage of single-room do you consider to be absolutely necessary?

A. 25 per cent. as a minimum in a thoroughly well-managed and well-arranged asylum.

Q. Can you give us any evidence on the percentage of single rooms in asylums in England?

A. Conolly gives two-thirds, Clouston 40 per cent. I hand in a statement (Appendices 6 and 7) showing the number of single rooms required for the proper accommodation of the present number (164) of male patients in the Ceylon Lunatic Asylum, as calculated in accordance with Clouston's (of Morningside Asylum) basis. As before said, I consider 25 per cent. is the fewest that can be worked with; every additional one I consider would be a distinct gain.

[The Commissioners proceeded to inspect the buildings, and after having so done, discussed the question of accommodating the males, and requested Dr. Plaxton to furnish a report setting forth what extra accommodation, in the shape of baths, latrines, &c., he considered necessary, and also requested Mr. Vine, the

Provincial Assistant, Public Works Department, to consider the question and prepare designs for the extra separate rooms required, and to report on Friday morning next, the 9th, at 7 A.M.]

Adjourned at 10 A.M. until the above date.

Lunatic Asylum, Cinnamon Gardens, 9th December, 1881, 7 a.m.

PRESENT:

The Hon. W. H. RAVENSCROFT, | Dr. LOOS,
The Hon. W. W. MITCHELL, | J. F. CHURCHILL, Esq.,

Dr. VANDERSTRAATEN.

[Dr. Plaxton produced a statement setting forth his views with regard to proposals made at the last meeting relative to the accommodation, in the new Lunatic Asylum, of the male patients. The same was read and attached to the proceedings. (Vide Appendix No. 8.)]

Dr. Plaxton's Examination continued.

Q. How many single rooms are there in the present Asylum?
A. Eleven; to supplement these there are four in the House of Observation.

Q. Could you do with a smaller number than 37 single rooms in the new Asylum?
A. I could do as I do now.

Q. Does an increase in number of single rooms increase or decrease the number of attendants?
A. Decreases the night staff, but the day staff would be unaltered.

[Mr. Vine produced a block plan of the buildings, prepared in accordance with the arrangement proposed at the last meeting, for the accommodation of the male patients.

Plan A.—Dr. Plaxton, after an examination of the plan, and being asked in what position the additional six single rooms would be most conveniently placed, stated that he considered it would be better to have the additional single-rooms on the upper floor.

Mr. Vine was asked to make the necessary designs.]

Q. Do you approve of the arrangements as proposed on plan (Mr. Vine's) for extra latrine accommodation?
A. No.

Q. Can you suggest any other?
A. No.

Q. Would it be better to omit the proposed latrines on the W. side, and would the accommodation then left be sufficient?
A. I think so.

Q. Do you object to the position of the bath-room as already constructed?
A. No very strong objection; but I think the baths are not so handy as they should be.

Q. Can you suggest any position for additional baths?
A. I would propose to put them in the places proposed for latrines on the ground-floor plan on the W. side.

Q. What are the structural objections you have to urge against the present baths?
A. That the patient bathing is out of the attendant's control; the attendant must be able to get on either side or at either end of the bath. The cocks should on no account be projecting into the bath as they are at present; the inlet and outlet should be from below, and the taps should be out of the patient's reach.

Q. Do you consider that the store accommodation provided for classes 1 and 2, as shown in plan, is suitable and sufficient?
A. I do not consider it as convenient as it ought to be, but as a temporary arrangement it is good.

Q. Would a slop sink and lavatory, consisting of a trough with water laid on at each of the end bath-rooms, as proposed to be constructed, be sufficient?
A. Yes.

Q. Do you consider it absolutely necessary to provide at once two padded rooms for classes 1 and 2.
A. Not absolutely necessary, but one must be provided.

Q. Why do you require shutters to windows in single rooms which in all cases open into a verandah?
A. Many patients, though requiring isolation, are extremely feeble: a chill caught in that condition would be apt to give them pneumonia, or pleurisy, or dysentery—which means death. Patients are frequently naked all night.

Q. Do you consider the enlargement of the windows absolutely necessary, having regard to the fact that they are now 2ft. 11in. × 2 ft. 3in. square, giving an area of about 5 superficial feet after allowing for the bars, and that there are openings of about a similar size over the doors, and ventilation at the bottom of the walls?
A. I do not consider it absolutely necessary.

Q. With regard to the upper floor of block proposed for accommodation of classes 4 and 5, as there is no bath-room accommodation on the floor, would it be convenient and suitable if the patients were to use a temporary building to be erected on the grounds near by?
A. Yes; though I consider that there should be a bath-room on this floor under proposed arrangements for patients.

Q. Would it be suitable to have a lavatory and slop sinks, as on ground-floor, and in similar positions?
A. Yes.

Q. Do you approve of the arrangement proposed on plan—upper floor of connecting block for Europeans?
A. No; the two rooms now marked "2 patient" (120 feet each) should be used for stores for classes 4 and 5; and another arrangement provided for four separate single rooms.

Adjourned to 18th December, at 7 A.M.

Lunatic Asylum, Cinnamon Gardens, 13th December, 1881, 7 a.m.

PRESENT: All the Members.

Mr. Vine submitted amended plan for the accommodation of Europeans. Considered the same.

Dr. Plaxton's Examination continued.

Q. Do you approve of the proposed single rooms for accommodation of Europeans, as shown on amended plan (C.)?

A. It seems to me to be the best arrangement that can be made.

Q. Do you consider the arrangements as shown on amended plan (C.) for latrines, lavatories, baths, and storeroom for proposed European ward suitable for Europeans?

A. They seem to me to be the best that can be made.

Q. Have you any suggestions to make with regard to the arrangements as shown on amended plan (G.) for sick class (class 3)?

A. Single rooms have been omitted, and must be supplied, and the best way of supplying them appears to be by making five single rooms in the space unappropriated in connecting block.

[Mr. Vine took a note of required alteration, and also with respect to alteration of position of latrines.]

Q. Have you any suggestion to make regarding the arrangements for the House Surgeon's quarters and administration accommodation?

A. I see no objection to the arrangements for the House Surgeon, but I think the offices and surgery should be on the ground-floor.

[The Commissioners referred to plan G. and found there was an unappropriated space on ground-floor of connecting block.]

Q. (*To Dr. Plaxton*):—Do you consider that the unappropriated space (plan G.) is suitable for offices, and do you recommend the appropriation of a portion of the expense store (vide plan G.) for a surgery?

A. Yes, if a partition be put up, the proposed office accommodation will answer temporarily; and I see no objection to taking a portion of the expense store for a surgery.

[Mr. Vine took a note of the required alteration.]

Adjourned to 16th December, at 7 A.M.

Lunatic Asylum, Cinnamon Gardens, 16th December, 1881, 7 a.m.

PRESENT: All the Members.

Dr. Plaxton's Examination continued.

Q. Have you considered the question of the accommodation of the female patients in the part of the Asylum so far unappropriated, and whether any further accommodation is absolutely necessary?

A. Yes.

Q. Will you give us your views on the subject?

A. In the first place, the block of building connecting the administration block with a block to be built according to original design on the West is unfitted for the reception of female patients, if the proposed disposal of male patients is carried out, owing to the impossibility of sufficiently isolating the sexes.

Q. (*To Mr. Vine*):—Do you consider that it would be possible to erect screens or blinds that would effectually prevent the patients of the two sexes from seeing each other, and that that would not unduly interfere with the ventilation?

A. Yes.

[Dr. Plaxton states that it will be absolutely necessary, in his opinion, to have the outer arches of the lower verandahs of the portions occupied by patients so closed in as to prevent the patients from getting out. Proposed to provide accommodation for female sick class (15 patients) on lower floor. Plan I.]

Q. (*To Dr. Plaxton*):—Do you consider that the arrangement now proposed will provide sufficient and suitable accommodation for the female sick class?

A. No.

[Dr. Plaxton was asked to consider the question of the accommodation for the female patients in the portion of the building at present unappropriated, and the further question of any additional temporary accommodation which may, in his opinion, be absolutely necessary, and to report on Monday, the 19th instant.]

Adjourned until Monday, the 19th, at 7 A.M.

Lunatic Asylum, Cinnamon Gardens, 19th December, 1881.

PRESENT: All the Members.

Dr. Plaxton's Examination continued.

[Dr. Plaxton, in compliance with request that he would consider the question of accommodation of female patients in the unappropriated portion of building, put in a paper (*vide* appendix 5), stating that for the accommodation of classes 1 and 2 and the European class, it would be needful to build; and he produced a rough sketch of what he thought would answer best, if a new building had to be put up. (Sketch marked "P.," put up with plans.)] *

Q. Do your consider that you could put female patients (classes 1 and 2) and the Europeans on the ground-floor of one-half of a block as per original design?

A. I could put them in, but I should not consider that the accommodation could be really efficient.

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* The sketch originally submitted by Dr. Plaxton has been lost; that put up has been subsequently prepared by him, but is in greater detail, and is more complete in many respects than the original.

[Dr. Plaxton was requested to confer with Mr. Vine, and to mark on a plan to be prepared by the latter (in accordance with original design for West block so far as the wall plan of the building is concerned), the distribution of the accommodation he considered to be the best that could be made under the circumstances for the treatment of classes 1 and 2, and the European class of females.]

Lunatic Asylum, Cinnamon Gardens, 22nd December, 1881.

PRESENT: All the Members.

[Considered plans prepared by Mr. Vine, in conjunction with Dr. Plaxton, for the extra accommodation required for the female patients.]

Q. (*To Dr. Plaxton*):—Do you consider that the plan produced (new block XX, *vide* general ground plan, new Asylum), is suitable for the accommodation of classes 1 and 2, and the European female patients?

A. No, it is not such a building as I would recommend.

Q. Do you consider that such a building and distribution as by sketch XXX (*vide* tracing attached to general ground plan, new Asylum), would be such as would meet with the approval of the Commissioners of Lunacy?

A. I very much doubt it.

Q. Do you consider XXX better than XX?

A. In some respects; but each has certain advantages over the other.

Q. (*By Mr. Churchill*):—Do not either of these plans afford very much better accommodation than you have at present at Borella?

A. I do not think that there is much to choose between the two as regards accommodation, except that the new building has superior single-room accommodation. I would rather treat the patients at Borella than at the new building, if the former were put into proper order.

Q. On what particular grounds do you say this?

A. With some slight alteration to the present buildings at Borella, the administration and supervision would be easier.

Q (*By Mr. Mitchell*):—To provide the necessary extra accommodation for the new Asylum, do you consider it would be desirable to depart altogether from the plan already followed, and build upon an entirely new one?

A. If the proper treatment of the insane is to be aimed at, I would say, depart at once from the plan.

Q. Are you prepared with a sketch of the nature of the accommodation you would recommend?

A. I have already handed in a sketch which suggests that which I think will meet the needs of the classes and numbers of patients under consideration. (Sketch marked "P.," with plans.)

Resolved to require the attendance at 7 A.M., on the 27th (Sunday), of the following gentlemen:—Dr. Tyner, Dr. Vandort, Dr. Coghill, and Dr. Tothill.

Adjourned to 27th December.

Lunatic Asylum, Cinnamon Gardens, 27th December, 1881.

PRESENT: All the Members.

Dr. Coghill examined.

Q. Have you any special experience of the treatment of lunatics?

A. None.

Q. Have you had any opportunities of seeing the insane under treatment?

A. Yes; at home. I have been through Morningside Asylum and one or two other asylums professionally.

Q. Do you consider the building proposed for a new Lunatic Asylum to be a suitable one for the reception and treatment of the insane?

A. No, I do not.

Q. Having seen on the plan the suggested alteration in the existing buildings, are they such as you would recommend? and will the buildings so altered afford the accommodation suitable for the patients under existing circumstances?

A. I think so; but I would suggest that the doors of the single rooms (plans A. and B.) be made to open on the corridor.

Q. What percentage of single rooms should be provided in an asylum, and how many should be given to each class of patients?

A. I am unable to supply this information.

Q. In building additional accommodation to receive a larger number of patients than the existing buildings will hold, do you consider that the same plan as has already been adopted should be adhered to, or should another be devised, and can you suggest a desirable one?

A. I consider that the plan already adopted should, as far as possible, be carried out as far as the outline is concerned, and I approve of the tracing. (*Vide* general ground plan XXX, for the interior accommodation.)

Q. Do you approve of the system of drainage intended to be adopted, as explained to you?

A. I do.

Dr. Vandort examined.

Q. Have you any special experience in the treatment of lunatics?

A. I was in charge of the Asylum at Borella for about six years.

Q. Do you consider the buildings now forming the new Lunatic Asylum to be on a proper plan for the reception and treatment of the insane?

A. I am not in a position to answer this question without a further acquaintance with the subject, and examination of the buildings.

[Dr. Vandort proceeded to examine the buildings.]

Q. Having seen on the plan the proposed alteration in the existing buildings, are they such as you would recommend, and will the buildings so altered afford accommodation suitable for the patients under existing circumstances?

A. I do not think the proposed alteration will afford suitable accommodation. I object to the situation of the proposed additional single rooms: even as regards the end rooms, I think there is an objection. All the single rooms should be detached from the general wards, because, otherwise, those in the wards will certainly be disturbed at night.

Q. Have you any other objection?

A. I think, except as regards the single rooms for classes 1 and 2 (males), the buildings, as altered, with some additional modification, might be made suitable.

Q. What percentage of single rooms should be provided in an asylum, and how many should be given to each class of patients?

A. From 20 to 25 per cent. on the whole population of the asylum; and, taking the classes as laid down in the statement by Dr. Plaxton shown to me, I should recommend that for classes 1 and 2, about 66 per cent.; class 3, one or two single rooms for special treatment of those who cannot be treated in general ward; class 4, none; class 5, none; Europeans, about 20 per cent.

Q. In building additional accommodation to receive a larger number of patients than the existing buildings will hold, do you consider that the same plan as has already been adopted should be adhered to, or should another be devised, and can you suggest a desirable one?

A. Uniformity of outline may be preserved, but the interior details of accommodation should be modified according to the requirements of the two sketches shown me, marked XX and XXX. I prefer that marked XXX for the accommodation of the female classes 1 and 2 and European females.

Q. Do you consider that the same percentage of single rooms is required in Ceylon as in England, or should it be greater or less?

A. I have no experience of treatment of patients in England, but I would state that the worse the attendance the more single rooms you require.

Q. Do you see any objection to the proposal to locate the House Surgeon and the Steward in the entrance block, reserving the lower rooms on ground floor on one side for one or two quiet European patients?

A. No; I think the arrangement suitable. I consider it very necessary that recreation and work-rooms be provided, as it is objectionable that the sleeping room should be occupied by the patients during the day. I also consider that a room in each range of rooms allotted to each class should be provided for the attendants?

Q. Do you approve of the system of drainage intended to be adopted, as explained to you?

A. I think the drainage arrangements are very good indeed.

Lunatic Asylum, Cinnamon Gardens, 11th March, 1882, 7 a.m.

PRESENT: All the Members.

Chairman laid letter from Dr. Plaxton, dated 4th January, 1881, (for 1882) before the Commission. *Resolved* that the same be attached to the proceedings (*vide* appendix No. 9). Considered and approved draft Report.

REPORT.

THE instructions furnished to the Commissioners appointed to enquire into certain matters connected with the Lunatic Asylum require them to ascertain how many patients can be accommodated in the buildings at the new Lunatic Asylum already completed or under construction, and what temporary modifications of the plans or additions thereto are desirable in order to accommodate the greatest number of patients in those buildings.

In their enquiry the Commissioners have somewhat exceeded the limits thus given to them, but only so far as it has appeared to them to be reasonable and necessary so to do, with a view to the preparation of a connected, and as far as possible, a complete report on the subject entrusted to them.

The result of the inquiries made by the Commissioners, supported by the direct evidence given on the subject, appears to show the necessity for the provision of separate accommodation in the proportion of 25 per cent. of the population of an Asylum in Ceylon. By a reference to appendix No. 7 it will be seen that, according to the high authority of Dr. Clouston, separate accommodation should be provided for 40 per cent. of the population of a Lunatic Asylum; and although it is admitted that the tendency in the present day is to encourage association and to discourage separation, which may be accepted as a reason for reducing this proportion, it should at the same time be remembered, in considering the requirements of an Asylum in Ceylon, as compared with one in England, that in the former the proportion of the excited and dangerous classes treated in the Asylum is probably greater than in the latter, even when the relative temperaments of the people of the two countries are duly considered, because, whereas in England nearly all persons of unsound mind are treated in Asylums public or private, in Ceylon it is chiefly those who are either excited, or dangerous, or troublesome to their friends, who are treated in the one existing Asylum—that is, in the public Government Asylum, the comparatively harmless being treated by their friends.

The Census of 1881, which purports to show that there are 3,103 * persons of unsound mind in the Island (although it is probable that this number should be accepted with some caution), while the population of the Asylum numbers 255 only, clearly demonstrates this. Under the circumstances, the Commissioners feel that in accepting 25 per cent. as the proportion of separate accommodation that should be provided in the new Lunatic Asylum, they have adopted a proportion that as nearly as possible is calculated to meet the necessities of the case. And they are of opinion that the distribution of the single rooms amongst the various classes of patients should, as nearly as circumstances will permit, be in accordance with the recommendation made by Dr. Plaxton (*vide* Appendix No. 8.)

Holding the above considerations in view, the Commissioners have considered the question submitted to them—firstly, as affecting the male patients alone; secondly, as affecting the female patients alone; thirdly, both male and female together. From the evidence given by those who have been represented to the Commissioners as most qualified to give a practical and reliable opinion on the subject, and from a most patient and careful examination into the details of the plans of the New Lunatic Asylum and of the buildings already constructed, the Commissioners are of opinion that while it is possible to make use of the buildings for the reception of lunatics, this can only be done at an increase to the present cost of supervision, and that the most advisable and satisfactory system of classification cannot readily and without some sacrifice of space be carried out, and that it will probably prove to be advisable to provide additional and isolated buildings for certain classes of patients, to wit, the excited and dangerous classes.

Subject to the above consideration, the Commissioners would beg to make the following recommendations:—

First, as regards the accommodation of male patients, who number 164, of whom 15 are Europeans and 149 of native origin. Accepting the classification given by Drs. Plaxton and Vandort, and acquiesced in by the medical members of the Commission, the distribution of the male patients is as follows:—

Class 1, acutely excited, &c.	41
„ 2, recent admissions, melancholic, &c...	14
„ 3, sick, infirm, &c.	33
„ 4, convalescent, harmless, &c. ...	20
„ 5, permanent lunatics	41
„ 6, Europeans	15
	164

With the alterations and additions as shown in blue on plans herewith, it is the opinion of the Commissioners that the male patients can be accommodated in the following manner:—Classes 1 and 2 (or 55 patients) on the ground-floor of east block (*vide* plan A.); classes 4 and

* Males, 1,884; females, 1,219; total 3,103.—When these figures were furnished by the Registrar-General (21st June, 1882), some of the smaller district returns had not been checked, so it is possible that a slight difference may be shown when the Census returns are published.

5 (or 61 patients) on the upper floor of east block (*vide* plan B.); class 3 (or 33 patients) on ground-floor of front portion of central block and portions of ground-floor of E. and W. connecting blocks (*vide* plans E. and G.); Europeans (15 patients), on upper floor of east connecting block (*vide* plan C).

To avoid confusion, the Commissioners do not submit separate plans to show the manner in which it would seem that the females—if the females alone were moved to the new Asylum—can best be accommodated. The arrangements as proposed for the males would, with some little modification, be suitable.

In considering the question of accommodation for all the patients, male and female, in the new Lunatic Asylum buildings, it at once became evident that the buildings at present in existence do not afford all the accommodation that is required, and although the instructions under which the Commissioners are acting appear to limit their work to a consideration of the buildings now existing and alterations and additions thereto, and do not perhaps authorise them to enter into the question of the erection of additional buildings, yet the circumstances of the case seem to them to show that their work would be but imperfectly completed, and that Government would not be in the possession of as much information as in the course of the enquiry has been afforded, unless the question of the accommodation of all the patients were discussed, and this can only be done by a slight extension of the enquiry beyond the limits assigned by the instructions.

The following is the distribution of patients that, in the opinion of the Commissioners, is the most suitable that can be devised for the accommodation of all the patients (male and female) in the new Lunatic Asylum, alterations and additions being marked on the plans in blue :—

Male Patients.—Classes 1 and 2 (55 patients) on ground-floor of east block, (*vide* plan A.); classes 4 and 5 (or 61 patients) on upper floor, east block, (*vide* plan B.); class 3 (or 33 patients) on ground-floor, front portion of central block and portions of ground-floor of connecting blocks, (*vide* plans E. and G.); Europeans (15 patients) on upper-floor of east connecting block, (*vide* plan C.)

Female Patients. - Classes 4 and 5 (44 patients) on front portion of upper floor of central block (plan D.) and upper block of west connecting block, (plan H.); class 3, (14 patients) on ground-floor of west connecting block (plan I.)

To accommodate classes 1 and 2, and the European female patients, additional buildings are required, and to the consideration of this subject—one of great importance—the Commissioners have given their most earnest attention.

In the first place, they agree that as regards position, it would be advisable to erect the buildings required on the site of the west block, as shown on the original plans for the Asylum.

The question of the plan and general design of the buildings is one of no slight difficulty, it having been shown and admitted that the original plan—that on which the buildings already constructed have been built—is, in many essential particulars, ill-adapted for the safe, convenient, and economical accommodation and treatment of the insane.

In considering this subject the Commissioners consulted Dr. Plaxton, the Superintendent of the Lunatic Asylum, who submitted a rough sketch of a plan of a building that, although not in his opinion meeting all the requirements that the latest experience shows to be necessary for the most perfect accommodation and treatment of insane persons, is the most suitable that under the circumstances he can suggest. This plan is marked P. and is put up with the plans.*

It will be seen that this plan is a total departure from the general design of the Asylum, and as it appeared to the Commissioners to be very desirable that, if possible, the general design should be adhered to, they very fully discussed the subject, and requested Dr. Plaxton to reconsider his recommendation and, in consultation with Mr. Vine, the Provincial Assistant, Western Province, to suggest the best means of providing the accommodation required, having due regard to all requirements for the proper treatment of the patients, within a building constructed, as regards the exterior walls, on the plan already approved and, on which the already existing east block has been constructed.

A plan was accordingly submitted to the Commissioners. (*Vide* general ground plan, new Asylum, west block, marked XX.)

On a careful consideration of this plan, the Commissioners were of opinion that it exhibited certain serious defects, among which they would note that the separate single-room accommodation is in a double row, and that several of these rooms are unprotected on one side by verandahs, and as it appeared to them that the space provided within the exterior walls of the building, as shown on the plan, is capable of being distributed in a manner more suitable to the requirements of the case, they suggested various amendments, which resulted in the preparation of a plan (*vide* tracing attached to general ground plan, new Asylum, marked XXX), on which is shown the arrangements that, in the opinion of the Commissioners, seem to be the best that under the circumstances of the case they can suggest for the accommodation of classes 1 and 2, females, (or 26 patients), and the European females (or 4 patients).

Considering the space provided by the amended plans and the number of patients presently to be accommodated and treated in the Asylum, it will be seen that in the majority of the classes the space is in excess of immediate requirements, thus allowing for a certain amount of increase in the number of insane under treatment in the Asylum. The Commissioners are aware, however, that the number of those treated at present by Government forms but a small proportion of the total number of persons of unsound mind in Ceylon, and that it is necessary, therefore, to anticipate the probability of a very considerable increase in the population of the Asylum, and they think it

* Dr. Plaxton's original rough sketch having been lost, he has furnished another sketch, which, although in many respects identical so far as the general plan is concerned with his original sketch, is, in many of the details, different.

well to state that in considering the present requirements they have borne the above in mind, and would suggest that in dealing with any further extension of the Asylum beyond that submitted now by the Commissioners, it would be well to consider the advisability of providing the separate accommodation required for the dangerous and excitable classes in buildings distinct from those used for the other classes, and for those of the classes first-named, who may be kept in association. By so doing, the chief objections raised to the arrangement proposed by the Commissioners for the accommodation of classes 1 and 2 (males), viz., the close proximity of the separate rooms and the association wards, would be removed.

By the suggestion already made, it will be seen that the Commissioners have appropriated for patients that portion of the central block that on the original plan is set apart for Superintendent's and Steward's quarters, and for officers; for the latter, *i. e.*, for the officers, sufficient accommodation has been found on the lower floor of the east connecting block, where also it is proposed to provide for a surgery. (*Vide* plan, ground-floor, central block, G.)

As regards accommodation for the House Surgeon (not the Superintendent, as incorrectly noted in the original plan) and Steward, the Commissioners having been assured that no objection thereto exists, would recommend the following arrangement:—That the upper floor of one side of the entrance block be allotted to the House Surgeon; the whole of the other side of the entrance building be allotted, at any rate temporarily, to the Steward, who, it is stated, is a man with a large family.

This allotment being made, there still remains the lower floor of one side and certain rooms in the centre of the entrance building available for appropriation, and the Commissioners would propose to devote the lower floor on one side to one or more quiet European patients and the necessary attendants, the back room facing the wards being used for the patients, the room facing the road for attendants, &c.; the rooms in the centre of the building can be used for attendants.

In the event of the removal of the Superintendent from Borella to the new Lunatic Asylum, which will be necessary if all the patients are transferred, or if the male patients alone are transferred, the Commissioners would represent that it will be necessary to provide a house for his accommodation in close proximity to the new Asylum. At present there is no house specially provided for the purpose, and as the building of one would be a matter of time, they beg to suggest that a house in the vicinity be rented for the purpose, as a temporary measure, although it would not be advisable that, as a permanent arrangement, the Superintendent should live at any considerable distance from the Asylum.

In addition to the buildings already constructed, or that the Commissioners have suggested as necessary, it has been stated that accommodation for the following purposes is required:—Dead-house, wash-house, work-sheds, disused store, garden store, sheds in airing courts; and having duly considered the matter, the Commissioners submit and recommend the plans marked R.S.T., designed to furnish the accommodation required, for the first two, and the last of these, plans for the work-sheds, disused store, and garden store are not appended, as it is considered that they may be of a temporary character.

In addition, the Commissioners would represent the necessity of providing for the following:—Guards to the open verandah; arches on the ground-floor; shades to interrupt the view from the windows of one part of the Asylum to another; exits to airing courts for wards on ground floor; wall to isolate the kitchen premises; arrangements for fire; planting of shade trees; provision of shutters to windows of separate single-rooms, and protection of openings to guard against attempts to commit suicide; minor alterations in bath-rooms.

And in conclusion, the Commissioners would state that in considering alterations and additions that in the course of their inquiries appeared to them to be necessary, the cost of the same naturally demanded and received their attention; they therefore obtained from the Provincial Assistant, Public Works Department, Western Province, a rough estimate thereof, which will be found attached to the proceedings. (*Vide* Appendix 10).

W. H. RAVENSCROFT,
Auditor-General.

JAMES LOOS, M.D.,
Acting Principal Civil Medical Officer
and Inspector-General of Hospitals.

J. L. VANDERSTRAATEN, M.D.,
Principal of the Ceylon Medical College.

DISSENT by the Hon. W. W. MITCHELL.

I AM unable to concur entirely in the report of the Official Members of the Commission on the new Lunatic Asylum, and I desire to record the following:—

I am of opinion that the design upon which the buildings have been erected is one altogether unsuitable for a country like Ceylon.

The palatial nature of the structure cannot be too strongly condemned, involving, as it has done, an expenditure of public money far beyond what would have been found necessary, had proper enquiry been made as to the description of accommodation required here.

The local medical authorities who have been in charge of lunatics in the Island do not appear to have been consulted, or, if they have, their advice has been disregarded.

The plans submitted or suggested by the Secretary of State seem to have been adopted without question, and it does not appear that they received the approval of the Commissioners of Lunacy, or that they were submitted to them.

One of the most eminent authorities says that "uniformity of accommodation and arrangements throughout the buildings should be most carefully avoided," owing to the different states of mind of the patients to be treated, but the buildings that have been erected will not admit of classification of patients without much sub-dividing, &c., and the provision of a very much larger number of single rooms is absolutely necessary in each class. The latrine, lavatory, and bathing accommodation is inconvenient and insufficient, and the Commissioners have suggested necessary additions.

The open arches in the verandahs require to be enclosed to prevent escape, the gratings of the cell windows need to be raised to be out of reach, and sundry alterations have had to be devised, and are recommended, to screen the portions to be occupied by males from those to be occupied by females. But after all this has been done the buildings can never form a properly-arranged lunatic asylum, where the insane can be suitably treated; and supervision will be attended with very great difficulties and expense.

It is desirable that sufficient accommodation be provided at the new Asylum for all the patients, male and female, and that the existing Asylum be given up, instead of there being two institutions of the kind. For this purpose it would be necessary to erect additional buildings. Some of the Commissioners consider that in doing so the present plan, as far as the external structure is concerned, should be adhered to, but I am of opinion that a new plan such as that suggested by Dr. Plaxton should be adopted.

In addition to this, the following will be required:—Dead-house, wash-house, work-shed, disused store, garden store, enclosed airing courts and sheds—none of which appear to have been provided for in the plans.

I recommend that the report of the Commission, with the plans and proposed alteration and additions, be submitted to the Commissioners of Lunacy for their approval or otherwise, drawing their attention at the same time to the different conditions prevailing in Ceylon, as compared with England, as regards the nature of the accommodation that is believed to be desirable for lunatics.

Colombo, 11th March, 1882. W. W. MITCHELL.

DISSENT by the Acting Director of Public Works.

I do not agree with the other Commissioners in their opinion of the design for the Asylum, only a portion of which has been built, viz., the entrance block, the central administration block, and one pavilion, with the connecting wing. The whole design provides for separate entrance buildings, a central administration block with two pavilions on either side—the males to be on the one side of the administration block, and the females on the other side—and their connecting wings with the administration block to contain all the work rooms and store rooms required; the patients to sleep on the upper floors of the pavilions, and the lower floors to be used as day and recreation rooms. The whole of the rooms on both floors are surrounded by wide verandahs. Each pavilion would accommodate about one hundred patients, and in each pavilion were eighteen single rooms. I consider that if the building were completed according to the original design it would form a complete asylum suitable to the climate and the requirements of the patients.

As regards the number of single rooms in each pavilion, the Principal Civil Medical Officer gives it as his opinion, in expressing his general approval of the design for the Asylum, when submitted for his opinion, that too many single rooms were provided, and that ten per cent. to the number of patients would have been sufficient.

The cost of the additional (to the existing buildings) block for females recommended by the Commissioners to be built would be Rs. 1,861 per patient; if built according to the plan proposed by Dr. Plaxton, would cost Rs. 2,160 per patient, while, according to the original design, the whole accommodation for four hundred patients, including the cost of entrance block, administration block, work rooms and store rooms, would be at the rate of Rs. 1,500 per patient.

It may be stated that about two hundred prisoners are housed in the pavilion now built while employed upon the erection of other portions of the buildings, and the prison authorities are well satisfied with the accommodation and protection afforded, and the very healthy condition of the prisoners who occupy the building.

J. F. CHURCHILL,
Acting Director of Public Works.

3rd May, 1882.

APPENDIX.

No. 1.

The CHAIRMAN, Lunatic Asylum Commission, to the DIRECTOR OF PUBLIC WORKS.

SIR,—I HAVE the honor to request that you will be good enough to test the grounds around the new Lunatic Asylum as to the depth at which the water is now lying after yesterday's rain, and report whether all the surface water can be drained off by surface drains into a field at some distance, and what is the distance to which foul water can be conveyed by the surface drains.

I am, &c.,
W. H. RAVENSCROFT,
Chairman, Lunatic Asylum Commission.

No. 2.

REPORT by the ACTING DIRECTOR OF PUBLIC WORKS.

ON the 30th ultimo, after a very heavy rainfall for some days previously, and especially on the night before, I found the grounds about the new Lunatic Asylum quite free from water. Water is found at a depth of four feet from the surface of the ground. In other portions of the Cinnamon Gardens water was reached at a few inches below the surface of the ground.

All the water from the site of the Lunatic Asylum is drained off by the surface drains and the brick drains, and led by a deep drain under the public road at the back of the Asylum for a long distance through the fields into the stream that eventually falls into the Kélani river. There being a large number of prisoners now quartered at the Lunatic Asylum, all the foul water from the washing of the latrines and kitchen, &c., is conveyed by these drains through the fields as described.

The present drainage of the premises I consider good, and there is every facility for increasing it if required when more people are put into the building.

J. F. CHURCHILL,
Acting Director of Public Works.

Public Works Department,
Colombo, 2nd December, 1881.

No. 3.

The CHAIRMAN, Lunatic Asylum Commission, to the Hon. the COLONIAL SECRETARY.

Colombo, 1st December, 1881.

SIR,—AT the desire of the Commissioners appointed to enquire into certain matters connected with the Lunatic Asylum, I have the honor to request that the Commissioners may be furnished with any observations or reports by the Commissioners of Lunacy in England that have been received by the Government of Ceylon on the subject of the plans of the new Lunatic Asylum now under construction in the Cinnamon Gardens, Colombo.

I am, &c.,
W. H. RAVENSCROFT,
Chairman, Lunatic Asylum Commission.

The Hon. the COLONIAL SECRETARY to the CHAIRMAN, Lunatic Asylum Commission.

Colonial Secretary's Office,
Colombo, 6th December, 1881.

SIR,—WITH reference to your letter of the 1st instant, I am directed to inform you that all the papers relating to the new Lunatic Asylum were sent to you with my letter of the 19th ultimo, and to state that you are at liberty to place them at the disposal of the Commissioners.

2. These papers, which have been sent to you in original, should be carefully returned to this Office when done with.

3. No report of the Commissioners of Lunacy on the new plans has been transmitted to this Office.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

Nos. 4 & 5.

CEYLON LUNATIC ASYLUM.—STATEMENTS BY Dr. PLAXTON.

Male Inmates.

All told	...	...	164
European class	...	15	
Others	...	149	
			164

Class.			
1	Acutely excited, &c.	...	41
2	Recent admissions, Melancholic, &c.	...	14
3	Sick, infirm, &c.	...	33
4	Convalescent, harmless	...	20
5	Permanent Inmates	...	41
6	European class	...	15
			164

Percentages of Male Inmates other than Europeans.

Class.			
1	Acutely excited, &c.	...	27·51
2	Recent admissions	...	9·39
3	Sick and infirm, &c.	...	22·14
4	Convalescent, &c.	...	13·42
5	Permanent inmates	...	27·51
			99·97

6 Europeans—9·14 per cent. of the total inmates.

Female Inmates.

All told	...	...	88
Europeans	...	...	4
Others	...	...	84
			88

Class.			
1 and 2	...	...	26
3	...	...	14
4	...	...	15
5	...	...	29
Europeans	...	..	4
			88

Class.	*Percentages.*		
1	..	...	20·23
2	..	...	10·71
3	...	...	16·66
4	...	...	17·85
5	...	...	34·52
			99·97
Europeans	...	...	4·54 per cent.

Patients other than European are	84
Europeans are	4
	88

The proportion of single rooms (25 per cent.) gives 21 for 84 patients.

Though European population is small two single rooms will not be too many.

Apportioning the single rooms as on male side—classes 1 and 2 to have 80 per cent. single rooms, say 17, class 3 to have 20 per cent, single rooms, say 4, Europeans to have 2, total number of single rooms required 23.

J. W. PLAXTON,
Medical Superintendent.

December 3rd, 1881.

No. 6.

MALE POPULATION, 3rd December, 1881.—All told 164.

		Number.		Percentages.
Classes 1 and 2	...	55	...	37
„ 3	..	33	...	22·14
„ 4	...	20	...	13·42
„ 5	..	41	...	27·51
Europeans	...	15	...	—
All told	...	164		100·09

PERCENTAGE OF SINGLE ROOMS required, calculated on Clouston's basis.

Classes 1 and 2	want 61 per cent. single rooms		=	33·55	single rooms.
„ 3	„ 33·33	„	=	11·00	„
„ 4	„			—	„
„ 5	„ 32·00	„	=	13·12	„
Europeans (self)	„ 66·00	„	=	10·00	„
				67·67	= 41 per cent.

No. 7.

SINGLE ROOMS, 40 per cent.—*Vide* Clouston, I.M.S., October, 1879.

Class of Patients.		Percentage of Population.		Number of single rooms given to the class.		Percentages of single rooms to number in class.
1 and 2	...	36	...	22	..	61
3	...	21	...	7	...	33·33
4	...	18	...	0	...	—
5	...	25	...	8	...	32·00
		100		37		—

The apparent error in the advertised number of single rooms and the total in column 3 (40 and 37) is probably explained in the text of Clouston's article when dealing with classes 1 and 2 or with class 5.

No. 8.

Europeans	...	...	15
Others	...	...	149
		Total ...	164

By proposal of Tuesday last, December 6th, 1881, classes 1 and 2, or $\frac{55}{149}$ of insane (other than European) are to be lodged in No. 1 block on ground-floor.

Night accommodation should be, much of it, in single rooms : Clouston gives 72 per cent. as accommodated in this way. 72 per cent. of 55 is equal to 39·60 single rooms.

I have put the single-room accommodation at 25 per cent. over total inmates. In this case, then, it equals 37 single rooms ; $\frac{25}{100}$ of 145 is equal to 37·25 single rooms.

37 single rooms, then, is the fewest we can do with in the new Asylum, and they must be for the most part given to these classes. A few must be given to the sick class of patients, say 6 or 7 ; the other classes (4 and 5) must do without.

There remain 30 single rooms to be found for these classes, and they must be found in No. 1 block.

In proposed scheme, 20 single rooms are found on ground-floor, and at most, 4 above ; six more single rooms are, therefore, to be found.

The extra accommodation called for here are latrines, baths, stores, slop sinks and padded rooms.

Latrines.—A patient going to the present latrine must be accompanied by an attendant, or an attendant will have to be posted near the latrines. Many cases could not go without injury.

If other latrines are given, they must be in one or other verandah—very objectionable, especially here, where the class of patients are of the filthiest. Mr. Vine shows what seems the only possible place for them.

Baths.—In this ward there should be a bathroom immediately adjacent, with hot and cold water. The present baths are objectionable from position and structure. I cannot see where a bath can be put which shall be free from objection.

Stores.—Every ward should have its expense store. It must be remembered that, even in Ceylon, there are a good many little things which must be taken care of under lock and key :—(1) bedding, (2) articles used in cleaning, (3) medical appliances, (4) the food utensils.

Slop Sinks.—To be remembered that the food vessels need washing after each meal,—a place to wash has to be provided.

Lavatory.—The patients in these classes must wash (they eat their food with their fingers). No provision is made for this, and I do not see where it can be placed. Some of these patients will be nightly daubed all over with excrement, as will their rooms. The disposal of the water used in cleaning must be provided for. These patients cannot leave the ward to wash.

Padded Rooms present no difficulty, and Mr. Vine is in possession of my views of the proper mode of padding.

The Single rooms.—The existing single rooms are unsafe. The gratings over the doors may be made safe by being covered with perforated iron or, perhaps, zinc. The grating answering the purpose of a window must in the same way be made safe. It would, in my belief, be better to alter these apertures: (1) Make them larger and protect them by shutters, as would be done at home: shutters to be in two (upper and lower) halves ; each to lock.

The communication betwixt one single room and another must be closed ; if not, one man will keep the whole range awake if he be noisy.

Ventilation might be provided for by holes near the floor (protected) and near the roof. There is an alternative. The present apertures might be superseded by apertures placed completely out of reach of the patients. Shutters and perforated zinc, however, to be used as an extra guard and as a means of modifying the temperature of single rooms.

Upper-floor.—No. 1 block proposed as accommodation for classes Nos. 4 and 5. Number to be accommodated, 61. Extras wanted here are store, lavatory and slop sinks. It is a matter for grave consideration whether the venetians to the verandah are efficient as a protection from danger.

Ground-floor of Administration Block. (Class No. 3—the sick: number, 33.) The same extra accommodation needed here is the same as to classes, 1 and 2, with the addition of a small kitchen. Six single rooms are given to them. I do not see that a better plan can be found for the extra accommodation than that shown by Mr. Vine in his scheme of proposed changes.

Upper-floor of Administration Block.—This is resigned to the offices of the administration. The fatal (to my mind) objection to this proposition is, that there is such constant reference to the occupants of these offices that any other than the most central and easiest accessible position from all parts of the place, is not the one for these offices. Their true position in these buildings is the one assigned in the plan.

There are still to consider the positions of the dead-house, wash-house, work-sheds (husk-beating), "disused" store, garden store, wood store, visitors to patients (1) room.

There are still no dining room, no amusement room, no day rooms. No consideration yet given to the question of airing courts and their sunshades.

I find that it is almost impossible to go into the proposed scheme with good effect without having an outline plan of scheme before me ; and therefore should like, if any further consideration of the scheme is wished, to be supplied with such an outline plan.

J. W. PLAXTON,
Medical Superintendent.

No. 9.

The MEDICAL SUPERINTENDENT, Lunatic Asylum, to the NEW LUNATIC ASYLUM COMMISSION.

The Lunatic Asylum,
Colombo, 4th January, 1882.

GENTLEMEN,—To save future misinterpretation, and with the permission of the Commission, I wish to put on record that everything I may have said before the Commission is limited rigidly by the condi-

tions laid down, viz.:—(as I understand them) the housing of a certain number of patients in buildings already put up.

In no single instance am I to be understood to be unfettered and approving.

I am, &c.,
J. W. PLAXTON.

No. 10.

ESTIMATE of proposed works, New Asylum, exclusive of cost of labour, but including superintendence.

	Rs.	
Completing Pavilion A. and B., ground and upper-floor	2,710	
Do. European ward, Plan C.	1,201	
Do. Administration offices, ground-floor (plan G.) ...	2,768	
Do. Female wards, ground and upper-floor (plans D., H., and I.) ...	11,033	
Additional block for females	59,570 *a*	
To complete boundary walling	11,200	
180 Asylum Locks @ Rs. 13	2,340	
Building Dead-house and Post-mortem room	1,320	
Do. Wash-house	800	
4 Recreation sheds @ Rs. 400	1,600	
Allow for erecting temporary work-sheds, tool and disused stores ...	1,000	
Allow for erecting out-door latrine and baths for females... ...	800	
130 Corridor openings, ground-floor, fitted with bars, @ Rs. 16 ...	2,080	
Allow for laying on gas	11,800	
Do. Water-supply to lavatories, sinks, &c.	900	
Do. Sinking an additional well, with pump and supply piping ...	1,200	
		112,322
Allow for additions to entrance building	—	1,000
	Total ... Rs.	113,322

a Vide tracing marked XXX with General Ground Plan.

No. 11.

Mr. VINE to the Hon. W. H. RAVENSCROFT.

Public Works Department,
22nd September, 1882.

MY DEAR SIR,—I RETURN the tracings, with the alternative proposal laid down. The cost of each work is shown on enclosed paper. I have shown the cost per head for the original work as built and proposed to be appropriated, Dr. Plaxton's, and the alternative scheme.

Yours, &c.,
F. VINE.

Enclosure to Mr. VINE's Letter.

Dr. Plaxton's Sketch.

Area = 19,744 feet superficial; probable cost, Rs. 69,125. If by prison labour, deducting, say, about 20 per cent., the cost would be Rs. 55,300, exclusive of gas or water-supply.

Alternative plan (as per tracing.)

Area = 17,020 feet superficial; probable cost, Rs. 59,570. If by prison labour, deducting, say, 20 per cent., the cost would be Rs. 47,656, exclusive of gas or water-supply.

Dr. Plaxton's plan (sketch plan marked P.)—Cost per head, Rs. 2,160.
Alternative plan (tracing marked XXX, with general ground plan.)—Cost per head, Rs. 1,861.
Original plans as built and proposed to be appropriated, Rs. 675 per head.

F. VINE.

The PRINCIPAL CIVIL MEDICAL OFFICER to the Hon. the COLONIAL SECRETARY.

No. 625.

Principal Civil Medical Office,
Colombo, 15th September, 1882.

SIR,—I HAVE the honor to acknowledge the receipt of your letter No. 378 of the 1st of July last, transmitting the report by the Commissioners appointed by His Excellency the Governor to enquire into certain matters connected with the new Lunatic Asylum, and requesting me to furnish a report thereon.

2. Beyond visiting some of the lunatic asylums at home, I have no acquaintance with asylum construction. I have, however, carefully read over the Report of the Commissioners, and inspected with Mr. Vine the alterations and additions they propose in their report.

3. I regret to state that I am unable to give my approval to their proposals, as I consider they will not meet the wants of the insane population of this Colony.

4. I am strongly of opinion that the day-room on the ground-floor should not be converted into sleeping-rooms, as it is very desirable to have rooms for recreation and work where the insane can assemble out of the intense heat of the sun during the day, and out of the rain in wet weather.

5. I submit two plans which Mr. Vine drew up at my suggestion, either of which will meet the demands of the Medical Superintendent for extra single-room accommodation.

6. On a careful review of the Commissioners' report, and of the evidence given by the several medical gentlemen examined, I have come to the conclusion that, with the exception of Dr. Plaxton, neither the Commissioners nor the witnesses had any special knowledge of asylum construction. I am, therefore, of opinion that in such a serious matter, involving the expenditure of a large sum of money and the comfort of the most helpless class in the community, the Government should obtain the services of an asylum architect from India, if possible; if not, from home; and if this suggestion is carried out I feel confident that the present building can be made to form the nucleus of one of the finest asylums in the East.

The enclosures which accompanied your letters Nos. 378 and 404 are herewith returned.

I have, &c.,

W. R. KYNSEY,
Principal Civil Medical Officer and
Inspector-General of Hospitals.

XXIII.—1882.

PUBLIC INSTRUCTION DEPARTMENT.

REVISED CODE FOR AIDED SCHOOLS, 1883.

TOGETHER WITH

A NOTIFICATION OF AMENDMENTS,

PREPARED BY

THE DIRECTOR OF PUBLIC INSTRUCTION.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

CODE FOR AIDED SCHOOLS, 1883.

PRELIMINARY CHAPTER.

1. A sum of money is annually voted for grants-in-aid.

2. These grants are administered by the Department of Public Instruction, hereinafter called the Department.

3. The object of the grant is to *aid* local exertion, under certain conditions : (*a*) to maintain schools ; and (*b*) to train teachers.

4. Aid to maintain schools is given by annual grants to the managers, conditional upon the attendance and proficiency of the scholars, and the state of the schools.

5. No grant is made in respect of any instruction in religious subjects.

6. Officers are employed to verify the fulfilment of the conditions on which grants are made, and to report the results to the department. For the convenience of managers the instructions of the department, issued to these officers, will be published annually as an appendix to the rules and regulations for grants-in-aid, hereinafter called the code.

7. These officers are appointed by Government and are called inspectors or assistant inspectors.

8. No grant is paid except on a report from one of these officers that the conditions of the grant have been fulfilled.

9. The department, at the time of agreeing to make grants to schools, informs the managers in what month to look for the inspector's annual visit. This month remains the same from year to year, unless the department informs the managers of a change. Notice of the day of the inspector's annual visit is given beforehand to the managers.

10. An inspector, or assistant inspector, may visit any aided school at any other time without notice.

11. No undertaking should be commenced in general reliance upon aid from Government. Grants cannot be claimed for any school, irrespective of the circumstances of the case and the limits of the sum at the disposal of Government. Should a grant be refused the reason for its refusal will be communicated to the applicants.

12. As a general rule, no application will be entertained for aid to a boys' school when there already exists a flourishing boys' school of the same class within two miles of the proposed site, without some intervening obstacle, unless the average daily attendance for six months prior to the date of application exceeds 60. An anglo-vernacular school will be considered as of the same class as a vernacular school.

12 *a*. Every application for the registration, change of site, or transfer of management of a school will be notified in the "Government Gazette."

13. The proprietors of a school must appoint a correspondent with the department, who will be hereinafter called the manager, and must give notice of any change of correspondent. Teachers cannot act as managers of, or correspondents for, the schools in which they are employed.

14. No article in this code shall be revoked, altered or amended without the previous sanction of the Governor and Executive Council, and any such revocation, alteration, or amendment shall be published in the "Government Gazette."

15 The code shall be printed each year, in such a form as to show separately all articles cancelled, or modified, and all new articles, since the last edition, and shall be laid on the table of the Legislative Council within one calendar month from the opening of the session.

16. The schedules annexed to the code, including the instructions issued to Inspectors, shall have the same effect as the articles of the code, and shall be subject to the provisions of articles 14 and 15.

CHAPTER I.

ANNUAL GRANTS.

SECTION I.—*Preliminary Conditions.*

17. The managers of aided schools must furnish all returns that may be required by the local Government or by the department.

18. Managers of private schools unconnected with any recognised society or public body, will be required to give substantial security for the maintenance of such schools for a period of not less than three years before they can be entered on the register. A form of bond to be entered into in these cases may be obtained from the Director of Public Instruction.

19. Applications for grants must invariably be made on forms supplied for that purpose by the department.

20. Before any grant is made to a school, the department must be satisfied that—

(*a*) Scholars are being instructed in at least two of the standards set forth in schedules B., D., E.

(*b*) The average daily attendance for three months prior to the application is not less than

(*a*) *In towns.**

In a boys' school	50
In a girls' school	30
In a mixed school of boys and girls	60

(*b*) *In villages.*

In a boys' school ...	30
In a girls' school	20
In a mixed school of boys and girls ...	30

(*c*) *In C. schools* (*Vide infra.*)

In a boys' school	15
In a girls' school	10
In a mixed school of boys and girls ...	15

(*c*) The girls in a girls' school are taught plain needlework as part of the ordinary course of instruction.

(*d*) Registers of admission and daily attendance are accurately kept, and that the returns furnished are trustworthy, and that

(*e*) The school buildings, furniture, and apparatus are sufficient according to the requirements for registration, and in good repair.

21. Any school accepted by the department which ceases to fulfil any of the above conditions, or which fails to earn 50 per cent. of passes at the annual examination, will, unless satisfactory reasons be furnished to the department, be removed from the list of aided schools. If the manager wishes to revive at any time a school removed from the list, application must be made in the same form as for a new school.

22. Grants are made on the same terms to all practising schools attached to training schools.

SECTION II.—*Registration.*

23. Schools may be registered for grants-in-aid either as vernacular, anglo-vernacular, or English schools, and as primary, middle, or high schools.

Vernacular Schools.

24. Vernacular schools may be registered as primary, middle or high schools.

Vernacular primary schools are schools in which no scholar is presented for grant above standard V.

Vernacular middle schools are schools in which scholars are presented for examination in any standard above standard V.

No vernacular primary school will be examined as a middle school unless it has been registered as a middle school during the year preceding the examination, and unless it has already presented successful candidates in the Vth standard.

A vernacular middle school may include a primary school.

Vernacular high schools are schools in which scholars are instructed in classical Sinhalese, Sanskrit, Páli or Tamil literature. Grants to such schools are only made in exceptional circumstances, and every application for such schools will be considered by the Government on its special merits.

Anglo-Vernacular Schools.

25. Middle vernacular schools may present for examination in English all or any scholars who have passed the IVth standard. Such schools are hereinafter called anglo-vernacular schools. No school will be examined as an anglo-vernacular school unless it has been registered as such during the year preceding the examination. Scholars may be presented for English passes in any of the four English standards, but no scholar will be examined twice in the same standard.

English Schools.

26. English primary schools are schools in which no scholar is presented above the Vth standard.

English middle schools are schools in which scholars are presented for examination in standard VI., VII. or VIII.

English high schools are schools in which scholars are presented for examination at the Cambridge local examination, or for Matriculation at the University of Calcutta or Madras, or in any of the specific subjects of examination enumerated in Schedule C.

An English middle school may include a primary school, and a high school may include middle and primary schools.

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* NOTE.—The places to be considered as towns for the purposes of this Code are as follows :—

Western Province.	*Within*
Colombo ...	Municipal limits.
Kalutara ...	Police limits.
Negombo ...	do.
Southern Province.	
Galle ...	Municipal limits.
Mátara ...	Police limits.
Central Province.	*Within*
Kandy ..	Municipal limits.
Eastern Province.	
Batticaloa ...	Police limits.
Trincomalee ..	do.
Northern Province.	
Jaffna ...	A radius of 1½ mile from the Fort.

No English primary school will be examined as a middle school unless it has been registered as such during the year preceding the examination.

27. No school will be registered as an English High school unless the department is satisfied :—

(*a*) That the teaching staff is sufficient in number and quality.

(*b*) That the managers are in a position to guarantee the stability of the school.

28. Middle and primary schools may be registered as A., B., or C. schools.

A. Schools.

(*a*) Before a middle or primary school is registered as an A. school, the department must be satisfied that the school buildings are expressly adapted for school purposes ; that they afford sufficient accommodation, and are kept in good repair.

(*b*) That the school is not surrounded by other buildings to such an extent as to exclude light and air, and that particular regard is paid to health and cleanliness both in the persons of the pupils and in the arrangements and condition of the school premises.

(*c*) That the supply of school materials, maps, and other appliances for teaching, desks, black-boards and other furniture ; books, writing materials, &c., are in sufficient quantity, and in good order.

(*d*) That the regular work of the school is conducted in an orderly and disciplined manner, and in accordance with a satisfactory time table.

B. Schools.

29. Upon the report of the inspector that an A. school does not fulfil these conditions, notice hall be given on form to the manager, and if at the next annual examination the requirements of he code are not satisfied, the result payments will be made on a lower scale, the value of a pass in ny standard or subject being R. 1. The school will then be classed as a B. school.

30. New schools may be accepted provisionally as B. schools until the manager has time to omplete new buildings and provide suitable furniture, but no school shall be allowed to remain on the B. list for more than one year. After that time if the department is not satisfied it will be removed.

Examination.

31. Managers of schools may claim after the annual examination—

(*a*) For every child receiving instruction in a vernacular or anglo-vernacular school under ten years of age on the day of examination who, having entered the school within twelve months of the date of examination, and having made not less than 100 attendances, is not, in the opinion of the manager, qualified to be examined in standard I., a capitation grant as follows :—

	Rs.	cts.
In A. schools	1	0
In B. schools	0	50

No capitation grant will be allowed for any child not present on the day of examination.

(*b*) For every scholar presented in standards I.—VIII., a sum calculated on passes achieved according to schedules F. G.

(*c*) No grant will be allowed for any scholar who shall have received less than nine months' instruction, during the twelve months immediately preceding the examination, in the school in which he is examined, and who shall have made less than 100 attendances.

NOTE.—In reckoning nine months' instruction, the month fixed for the examination may be included. The month of admission is not to be included unless the scholar is admitted on the first school day of the month.

(*d*) At a first examination, scholars may be grouped in any standard fixed by the manager, but scholars may not be presented a second time for examination, under the same standard, unless they fail to pass in more than one of the first three heads. If they fail to pass in more than one of the first three heads they will be considered to have failed altogether, and no result payment can be claimed for them.

(*e*) No grant will be allowed for any scholar over twenty years of age on the day of examination.

(*f*) No grant will be made for any scholar in standard I. who is over twelve years of age.

(*g*) Schools in which the scholars presented fail to earn 50 per cent. of passes in *Reading*, *Writing*, and *Arithmetic*, will receive result payments as B. schools.

(*h*) Falsification of the register will involve forfeiture of half the grant for the year, and in the case of certificated teachers the certificate will be suspended.

(*i*) Due notice having been given of the date of examination of any school, if the inspector finds that the school is not ready on the day of his visit, the expenses of the inspector's second visit will be deducted from the grant earned by the school, but the department does not bind itself to hold a deferred examination.

(*k*) No grant can be claimed for any girl taught in a school registered as a boys' school or for any boy over ten years of age taught in a school registered as a girls' school. No school will be examined as a mixed (boys' and girls' school) unless registered as such.

(*l*) No capitation grant will be allowed for any child who has at any time attended a Government school, and the manager will be required to certify that to the best of his belief no child presented for a capitation grant has received a capitation grant in any other school.

(*m*) The grants will be paid if possible within three months of the day of examination.

C. Schools.

32. Schools in outlying, sparsely-populated and neglected districts, unable to fulfil the conditions attached to A. schools may be registered as C. schools under the following regulations :—

(*a*) All scholars presented for examination without limit of attendance will receive the same grant as A. schools for passes achieved, but no child can be examined twice in the same standard.

(*b*) C. schools will receive, in addition, a capitation grant of three rupees, for each scholar present on the day of examination who has made over 100 attendances, but such capitation grant shall not exceed a sum of Rs. 90.

(*c*) An average daily attendance for three months of fifteen boys or ten girls, or fifteen boys and girls in a Mixed school, will be accepted as sufficient in application for registration as C. schools.

(*d*) In all other respects the regulations applying to A. schools will apply to C. schools.

Industrial Schools.

33. A scheme for the application of result payments to manual instruction is in preparation. In the mean time applications for grants-in-aid to industrial schools will be entertained on the following conditions :—

(*a*) The school shall teach a trade or trades to be approved by the Department.

(*b*) The workshops must be sufficiently provided with appliances for elementary instruction in the trade or trades to which the school is devoted.

(*c*) The master of each workshop must be qualified to teach his trade.

34. The managers of an industrial school registered by the department may claim, in addition to the general grants, for each boy above the age of ten years, certified to have been in regular attendance for nine months since the previous annual inspection of the school, and to have received instruction in the workshop for not less than three hours daily, a grant of five rupees.

Form of Certificate.

I, *A. B.*, manager of the registered industrial school , certify that every boy on this list has regularly attended this school for nine months since the date of the last annual inspection, and has received instruction in the trade specified opposite to his name for three hours daily, on not less than 100 days.

Name.	Age.	Trade.	Number of attendances.

Girls' Day Schools.

35. In Girls' day schools a fixed allowance will be made for needlework : (schedules F. G.)

Note.—With a view to introducing a graduated scheme for needlework the following Standards are suggested.

Standard I.

Neat hemming.

Standard II.

Hemming, sewing and felling so as to be able to make a bag ; also patch-work.

Standard III.

The former stitches and back-stitching, to be able to make pillow-cases; also marking.

Standard IV.

As before, and to put in a neat gusset so as to make their own jackets.

Standard V.

Stitches as before, also button holes and darning, and to be able to cut out a jacket.

Standard VI.

As in the previous Standards; also to be able to cut out and make under-jackets. Knitting *may be taught in this Standard.*

Standard VII.

As before ; also to be able to put in a neat patch and to make a little child's frock, pinafore, or shirt ; knitting.

Standard VIII.

As before, and to cut out and make a plain shirt with yoke back and gathered sleeves put into wristbands ; knitting.

Girls' Vernacular and Anglo-Vernacular Boarding Schools.

36. In girls' Vernacular and Anglo-vernacular boarding schools the value of a "pass" will be twice the value of a corresponding "pass" in day schools (schedule G. Note.)

37. When the day-girls do not amount to more than one-fourth of the number of boarders, their passes will be computed at the same rate as boarders. When the number of day-girls is in excess of one-fourth of the number of boarders their passes will be calculated as for scholars in day schools. Applications for grants in favour of girls' vernacular and anglo-vernacular boarding schools will be entertained without reference to the limitations prescribed in section 1, § 20.

CHAPTER II.

SECTION I.

Teachers.

38. After the first day of January, 1884, no new boys' school will be accepted as a Grant-in-aid anglo-vernacular, or vernacular A. school, unless the principal teacher holds a certificate or license from the department.

39. The certificates issued will be of three classes.

40. A third class certificate will entitle the teacher to hold the appointment of principal teacher in a primary school.

41. A second class certificate will entitle the teacher to hold the appointment of principal teacher in a middle school.

42. A first class certificate will be given to teachers who hold second-class certificates, only after five years' service either in the same school or in different schools under the same management. It will entitle the holder to an annual payment from Government in augmentation of salary on conditions to be fixed hereafter.

43. A certificate of the third class will be issued to every registered pupil-teacher who has completed three years' approved service as pupil-teacher in conformity with the rules of the department. It will be issued provisionally and confirmed after two years' satisfactory probation, either as principal teacher of a primary school or as assistant teacher of a middle school on the certificate of the manager.

44. Provisional third class certificates will be confirmed also after one year's training in an aided training school, provided that the holder shall have satisfied the examiners in the first year's examination.

45. A certificate of the second class will be issued to all students of a training school inspected by the department, who have completed two years' residence, and passed the final examination to the satisfaction of the examiners appointed by the department.

46. This certificate will not entitle the teacher to hold an appointment as head teacher of an Anglo-vernacular school, unless he has passed the qualifying examination in English appointed for each year of the training school course.

47. A certificate of the second class will also be issued to any holder of a third class certificate after three years' continuous service, in the same school or in different schools under the same management, on the recommendation of the manager; provided that the candidate has passed the final examination required of the students of training schools. It will be issued provisionally and confirmed after one year's satisfactory probation as teacher of a middle school, certified by the manager and the department.

48. Up to the 1st day of January, 1885, certificates will be issued :—

(*a*) Of the third class to any teacher who has been for three years in continuous charge of the same school or of different schools under the same management, and has presented scholars for examination at each annual inspection, and has earned result payments, on not less than 50 per cent. of passes, on the certificate of the manager to his ability and industry.

(*b*) Of the second class to any teacher who has earned result payments, under the same conditions as above, in the VIIIth standard* for three consecutive years immediately preceding the date of application for the certificate.

49. It shall be in the power of the Director to issue certificates of the second or third class to any Teacher, who holds a certificate of competency from any recognized Normal school or training establishment in Europe or in any part of the British Empire or in America.

49 *a*. Licenses will be issued to teachers in Grant-in-aid schools on the following conditions :—

A.—Licenses will be of two classes. Licenses of the second class will entitle the holder to hold an appointment as head teacher in a primary vernacular school. They will be issued to candidates who passed a satisfactory examination in the following subjects :—

Reading.—Good fluent reading, with comprehension, of a vernacular newspaper, public notice, school manual, or other book or document printed in correct modern Tamil or Sinhalese.

Writing.—To write a specimen of the penmanship used in setting copies of text-hand and small-hand; dictation.

Arithmetic.—As for VIth standard of vernacular schools, with vulgar fractions.

Geography.—Ceylon and Asia.

School Management.—Teaching a standard not higher than standard IV. in the presence of of the examiner. Method of keeping school registers. Examination in the Code for grant-in-aid schools.

B.—Licenses of the first class will entitle the holder to hold an app intment as head master of a middle vernacular or anglo-vernacular school. They will be issued to candidates who passed a satisfactory examination in the following subjects :—

Reading.—Reading with fluency and expression from a classical vernacular book with grammatical analysis.

Writing.—A short essay or letter; to write a specimen of the penmanship used in setting copies.

Arithmetic.—As for standard VIII.

History.—History of Ceylon.

Geography.—As for standard VIII.

School Management.—(1) To teach a class in the presence of the Inspector; (2) To answer questions in writing on the following subjects :—

a. The different modes of organizing a school;
b. The keeping of registers; the Code;
c. Notes of lessons; questions of discipline.

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* Or standard VI. of old Code.

Candidates for anglo-vernacular licenses will be required to pass in the English subjects required for the VIIIth standard in anglo-vernacular schools.

The first examination for licenses will be held in December, 1883, at such centres as shall be found most convenient for the candidates.

50. After the 1st day of January, 1884, no principal teacher shall be appointed to any vernacular or anglo-vernacular school in receipt of grant, unless he holds a certificate or license of the department.

51. After the 1st day of January, 1888, no grant will be continued to any vernacular or anglo-vernacular school which is not in charge of a teacher holding a certificate or license of the department.

SECTION II.

Pupil Teachers and Training Schools.

52. In order to enable managers to meet the future requirements of the code, by the systematic training of students for the profession of teaching, grants will be made for (*a*) pupil-teachers and (*b*) training schools.

53. Pupil teachers are boys or girls selected by the manager to assist the teacher of a school in maintaining discipline, and instructing the lower classes.

54. In making this selection the manager is required only to observe the following regulations:—

(1) Before pupil-teachers are submitted to the department for registration, application must be made in the form prescribed (schedule H.); they must have passed the Vth or a higher Standard in Reading, Writing, Arithmetic, and at least one additional subject.

(2) Pupil-teachers at the date of registration must be not less than 14 years of age, completed.

55. Pupil-teachers will be registered in such schools only as satisfy the following conditions:—

(*a*) The whole school must be favourably reported on by the inspector as regards

1.—Discipline.	3.—Premises, furniture, apparatus, &c.
2.—Instruction.	4.—Stability.

(*b*) The school must have obtained a grant for at least three years preceding the date of application, if an English school,* in standards VI., VII., VIII.; if a Vernacular school† in standards V., VI., VII.

(*c*) To entitle a school to one pupil-teacher, the average number of pupils examined for a grant during each of the three preceding years must be not less than forty; for every additional fifty in average attendance during three successive years, a school will be entitled to an additional pupil-teacher; but not more than two pupil-teachers will be registered for any school during the same year.

56. The course of studies for pupil-teachers is laid down in schedules I. and J.

57. Every pupil-teacher presented for examination must produce a certificate from the manager of his school in the prescribed form (schedule K.)

58. No pupil-teacher can be presented for his first examination within nine months of the date of registration.

59. The inspecting officer examining the school for a grant will at the same time examine the pupil-teacher in the subjects laid down, and will require him or her to give a lesson in his presence to one of the lower classes. If he is satisfied with the candidate's proficiency, he will sign the certificate upon which the manager may claim a grant.

60. If a candidate fail to satisfy the inspector, he may be presented again at the next annual inspection, in the same subjects of examination, but no result-payments for a candidate who fails can be claimed at the time of failure.

61. Grants will be made for pupil-teachers as follows:—

First year's Examination.

English schools, Rs. 50 + grant in full for VIth standard pass.
Anglo-vernacular and vernacular, Rs. 30 + grant in full for VIth standard pass.

Second year.

English schools, Rs. 75 + grant in full for VIIth standard pass.
Anglo-vernacular and vernacular, Rs. 50 + grant in full for VIIth standard pass.

Third year.

English schools, Rs. 100 + grant in full for VIIIth standard pass.
Anglo-vernacular and vernacular, Rs. 75 + grant in full for VIIIth standard pass.

NOTE.—The additional grant for a pass in any Standard will not be paid on account of any pupil-teacher who has already earned a grant in the same Standard.

TRAINING SCHOOLS.

62. Grants-in-aid will be made to vernacular and anglo-vernacular training schools, for male or female teachers, under certain conditions.

63. The department must be satisfied that

(*a*) The staff of teachers is sufficient in number and quality;
(*b*) The managers are in a position to guarantee the stability of the school;
(*c*) There is a practising school, in which students may learn the exercise of their profession, either immediately connected with the training school or within easy reach, and under the same management.

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* Or standards IV., V., VI. of the old Code. † Standards IV. and V. of the old Code.

Grants to Training Schools.

64. An examination of candidates for admission to training schools will be annually held in the month of December.

65. The examination will extend to all the subjects required of pupil-teachers in the course of their engagement.

66. Candidates who desire to qualify as anglo-vernacular teachers will have to satisfy the examiners in the English part of the examination.

67. The candidates are selected, and admitted to the examination, by the authorities of each school on their own responsibility, subject to no other conditions on the part of the department, than that the candidates,—

(*a*) Intend *bonâ fide* to adopt and follow the profession of teacher;

(*b*) Having been pupil-teachers have successfully completed their engagement;

(*c*) Not having been pupil-teachers or not having completed their engagement as pupil-teachers, will be more than seventeen years of age on the 1st of January next following the date of examination. At each examination a certain number of successful candidates, in proportion to the number of vernacular and anglo-vernacular aided schools, will be appointed Queen's scholars.

68. The number of Queen's scholarships to be competed for annually by boys is at present fixed at 5 per cent. on the number of vernacular and anglo-vernacular aided boys' schools.

69. The number of Queen's scholarships to be competed for by girls is also fixed at 5 per cent. on the number of vernacular and anglo-vernacular girls' schools.

70. The Queen's scholarships will be awarded to the most successful candidates presented for examination by each school, in the order of merit. Provided that the number of Queen's scholarships to be allotted to any manager or managers shall not exceed 5 per cent. upon the number of vernacular and anglo-vernacular schools under the same management.

71. At the end of one year after admission to a training school as a Queen's scholar, an examination will be held in the subjects prescribed in schedule L. and the managers will be entitled to a grant of 100 rupees for every Queen's scholar who passes such examination satisfactorily. Queen's scholars who fail to obtain one-third of the marks will forfeit their scholarships.

72. At the close of the second year there will be a final examination, and for each successful Queen's scholar the manager will receive the final sum of 150 rupees, making up the total value of the scholarship.

73. Candidates for the certificate of the Department not being Queen's scholars will be examined, if they present themselves at such examinations, and will be placed in three classes according to their order of merit.

CHAPTER III.

Section 1.

Superior Instruction.

74. The assistance granted by the department for the encouragement of superior instruction will be in the form of,—

1st.—Public examination.

2nd.—Payments on the results of examinations.

3rd.—Scholarships and exhibitions.

Public Examinations.

75. The examinations conducted by the syndicate of the University of Cambridge, for local examinations, hereinafter styled the senior and junior local examinations, will be the standard of examination, and will take the place of the local examination hitherto held. No marks for religious knowledge will be allowed in these examinations.

The scholarships and prizes awarded are limited.

(1) To candidates who compete in secular subjects only.

(2) To candidates being *bonâ fide* students in Government and Grant-in-aid schools.

Junior Local Examination.

76. On such day in each year as may be appointed the junior local examination will be held in Colombo, Kandy, Galle, and Jaffna, and in other places if it be required and found expedient.

77. The certificates of the University will only be awarded to students who pass this examination, except in the cases otherwise provided for, if under sixteen years of age, on the 1st day of January succeeding the examination. Local certificates, prizes, and exhibitions may be gained by all students under seventeen years of age on the last day of the month appointed for the examination.

78. For every candidate fulfilling the conditions of age, who shall pass this examination to the satisfaction of the examiners, the manager of the school at which he has received his education will be entitled to claim for each subject in which the candidate passes a grant of five rupees.

79. A book prize will be given to every candidate for each subject in which he passes in honors.

80. Three exhibitions—one of the value of rupees 240 per annum, and two, each of the value of rupees 120 per annum, tenable for three years either at the Royal College or at any registered high school, will be awarded every year to the three best candidates who shall pass this examination.

Senior Local Examination.

81. The senior local examination will be held under the same general conditions as the junior examination on such day as may be appointed in each year. The result payments, prizes and scholarships will be open to candidates who have not completed their 19th year on the last day of the month appointed for the examination.

82. For every candidate fulfilling the conditions of age, who shall pass this examination to the satisfaction of the examiners, the manager of the school at which he has been educated will be entitled to claim, for each subject in which the candidate passes, a grant of ten rupees.

83. A book prize will be given to every candidate for each subject in which he passes in honors.

84. One scholarship of the value of £150, tenable for four years, will be awarded at these examinations, to the student who having been resident in the Island for the five years next before the examination shall pass the best examination in honors. The successful candidate will have to proceed to one of the Universities of Oxford, Cambridge or Dublin, or to one of the Scotch Univertities, or to such other place of education as shall be approved of by the Governor, and will be required to gain such certificates of good conduct and progress as are usually awarded to meritorious students.

SECTION 2.

Specific subjects of Secular Instruction.

85. If the time-table of an English school in use throughout the year has provided for one or more specific subjects of secular instruction according to the table in schedule C.—

(*a*) A grant of the value of four rupees per subject may be made for every such scholar presented in standards VI., VII., VIII., who passes a satisfactory examination in not more than two of such subjects besides drawing.

(*b*) Any scholar who has previously passed in standard VIII. may, if qualified by attendance, be presented in not more than three of such specific subjects besides drawing.

CHAPTER IV.

VERNACULAR LITERATURE IN ENGLISH SCHOOLS.

86. English schools in which systematic instruction is given in a vernacular language and literature will be allowed to present scholars for vernacular passes in standards VI., VII., and VIII., of the subjects appointed for vernacular schools.

87. No scholar who has failed in the English part of the examination can be presented for a pass in vernacular literature, the value of which will be the same as in vernacular schools.

APPENDIX.

Schedule A.

UNIVERSITY OF CAMBRIDGE REGULATIONS FOR LOCAL EXAMINATIONS.

[The Regulations for the Examinations to be held in December, 1883, will be issued to Managers of Grant-in-aid High schools as soon as received.]

Schedule B.

STANDARDS of Examination for English Schools.

	Reading.	Writing.	Arithmetic.	Geography.	History.
Standard I.	A few sentences from a First Book (at least 30 pages) distinctly and accurately pronounced.	To form letters, small and capital, on slate or black-board.	Notation to hundred, addition orally of numbers whose sum does not exceed twenty, and subtraction of digits.		
Standard II.	A few sentences from a Second Book slowly and distinctly read.	To copy in manuscript characters a line of print on slate or black-board, and write from dictation a few common words. Copy-writing (single letters in large text) must be shown in this standard.	Simple addition and subtraction of numbers containing not more than five figures. Multiplication to 3 times 12.		
Standard III.	Clear and intelligible reading from a Third Book.	To write from dictation, words and short sentences, from the reading book, slowly read and then dictated. Copy-writing in large round text must be shown in this standard.	The four simple rules. Miscellaneous questions.		
Standard IV.	Good and intelligent reading from a Fourth Book. To point out nouns, verbs and adjectives in passage read.	To write a connected passage from the reading book, slowly read and then dictated. Copy-writing in small round text must be shown in this standard.	Use of rupees and cents, bills of parcels, simple problems.	Definitions. Use of Map of Ceylon.	
Standard V.	Good and intelligent reading from a Fifth Book with particular regard to emphasis. Parsing a simple sentence.	To write about eight lines slowly dictated from the reading book. Copy-writing in a running hand must be shown in this standard.	Reduction of common weights and measures and their application to foregoing rules, and the use of English money.	General description of figure of the Earth. Europe.	Ceylon.
Standard VI.	The same, from any book containing selections from good English authors. Parsing with analysis of a simple sentence.	To write to dictation from any newspaper or book.	Practice, simple and compound proportion.	General description of the ocean. Europe and Asia.	Outline of English History from 1066 to 1485.
Standard VII.	Reading with fluency and expression from any newspaper or book brought by the Inspector. Parsing and analysis of a short complex sentence.	Writing from memory the substance of a short story read out twice; spelling, handwriting, and grammar to be considered.	Vulgar and decimal fractions.	General description of the earth's surface. British Empire.	Same, from 1485 to 1688.
Standard VIII.	The same, with recitation of not less than fifty lines of prose or poetry. Meaning and allusions to be known, and if well-known to atone for deficiency of memory. Parsing and analysis of prose or poetry.	A short theme or letter; the composition, spelling, grammar, and handwriting to be considered.	Interest and discount with exercises on all the foregoing rules.	Physical and political Geography of the World.	Same, from 1688 to 1815.

1.—Scholars may not be presented a second time for examination, under the same standard, unless they fail to pass in more than one of the first three heads. If they fail to pass in more than one of the three first heads they will be considered to have failed altogether, and no result payment can be claimed for them.

2.—Reading may be tested in the ordinary class book, if approved by the Inspector; but the books must be of reasonable length and difficulty and unmarked. Every class ought to have two or three sets of reading-books. Managers are requested to send a copy of all reading books used, to the department, with an intimation of the standard for which they are intended.

3.—Copy-writing is to be done on paper in the presence of the Inspector.

Schedule C.

	1 Mathematics.	2 Latin.	3 Mechanics.	4 Animal Physiology.	5 Botany.	6 Drawing.	7 Chemistry.	Physics. 8 Light and Heat.	Physics. 9 Magnetism, Electricity.
1st Stage.	Algebra: notation, addition, subtraction, Euclid, Book I., propositions 1 to 15, inclusive.	Grammar, to the end of regular verbs.	Elementary knowledge of the different states of matter—solid, liquid, and gaseous—with illustrations of compressibility, elasticity, and resistance. Measures of space, and time, velocity.	The build of the human body; names and positions of the internal organs.	Characters of the root, stem, leaves, and parts of the flower, illustrated by specimens of common flowering plants.	Free-hand drawing from flat examples.	Elementary and compound matter, illustrations of combination and decomposition in such bodies as hydrochloric acid, water, oxide of mercury, and rust of iron.	General notions respecting the formation of shadows and the reflection of light. The formation of images by a looking glass. The three modes in which heat may be conveyed from one place to another. Effects of heat, expansion, melting, boiling, and evaporation.	Attraction, repulsion, and polarity as illustrated by the magnet, terrestrial magnetism and the mariners' compass.
2nd Stage.	Algebra, to simple equations (inclusive). Euclid, Book I.	Irregular verbs and first rules of Syntax. Knowledge of Delectus or other first Latin reading book. Translation of simple sentences of English (three or four words) into Latin.	Elementary knowledge of force and of the conservation of energy. The parallelogram of forces. General notions of gravitation.	Circulation and respiration and the broad structure of the organs concerned.	Structure of wood, bark and pith, cells and vessels. Food of plants and manner in which a plant grows. Functions of the root, leaves, and different parts of the flower.	Free-hand drawing from models.	Preparation and properties of the common gases, such as oxygen, hydrogen, and nitrogen, and chlorine. The chemical character and constituents of pure air and pure water, and the nature of the impurities sometimes found in both. The air-food of plants.	Refraction of light, appearance of objects under water, separation of white light into its components by a prism explanation of the thermometer. The disappearance of heat in the melting of solids, and the boiling of liquids.	Attraction of light bodies by rubbed sealing wax and glass. Experimental proof that there are two forms of electricity—attraction and repulsion. Gold-leaf electroscope.
3rd Stage.	Algebra, to quadratic equations (inclusive), Euclid, Books I. and II. Elements of Mensuration.	The Latin Grammar, Cæsar de Bello Gallico, book I. Somewhat longer sentences to be translated from English into Latin.	Elementary knowledge of the mechanical powers.	The organs and function of alimentation. The properties of muscle and nerve.	The comparison of a fern and a moss with a flowering plant. The formation of different kinds of fruits. The structure of a bean and of a grain of rice. The phenomena of germination.	Perspective. Candidates will be required to show a knowledge of the use of vanishing and measuring points used in horizontal planes; and to represent simple solids or objects on the ground plane in any position.	The properties of carbon as found both in inorganic and organic bodies with elementary knowledge of the constituents of food. Differences between metallic and non-metallic bodies. Combination by weight and volume. The use of symbols and chemical formulæ.	Rudimentary explanation of the Camera obscura, burning glass, magnifying glass, microscope, and telescope. Illustration of the difference of the specific heat of bodies. The causes of cloud, rain, and dew.	Construction of electrophorus, electrical machine, and Leyden jar; construction of a common battery. Explanation of a thunderstorm. Action of a current on the magnet.

Schedule D.

STANDARDS of Examination for Anglo-Vernacular Schools.

		Reading.*	Writing.*	Arithmetic.*	Geography.*	History.*	English Reading.	English Writing.
PRIMARY.	Standard I.	A few sentences from a First Book distinctly and accurately pronounced.	To form letters on slate or black-board.	Notation up to 999. Addition up to 20, and subtraction of digits.				
	Standard II.	A few sentences from a Second Book slowly and distinctly read.	To write to dictation short sentences out of the reading book. Copy-writing to be shown, large hand only.	Simple addition and subtraction of numbers of not more than four figures. Multiplication table to 3 times 12.				
	Standard III.	Clear and intelligible reading from a Third Book.	To write a connected passage from the reading book, containing two or three sentences. Copy-writing to be shown, large hand only.	Multiplication and division, with miscellaneous questions in the four rules.				
	Standard IV.	Good and intelligent reading from a Fourth Book.	Dictation from reading book. Round hand copy-writing.	Use of rupees and cents, bills of parcels, simple problems.	Definitions and Ceylon.			
	Standard V.	Good and intelligent reading with questions to show comprehension of sentences read (Fourth Book.)	Dictation from reading book. Small hand copy-writing.	Reduction of common weights and measures, and their application to foregoing rules.	Same, with outlines of the World.	...	A few sentences from a First Book containing at least 30 pages, distinctly pronounced, and translated into vernacular.	Dictation from reading book—single words.
MIDDLE.	Standard VI.	Good fluent reading with explanation from a classical work in prose.	Writing from memory the substance of a short narrative read out twice. Spelling, hand-writing and grammar to be considered.	Simple and compound proportion. Use of English Money.	Asia.	...	A few sentences from a second reading book distinctly read and translated into vernacular.	Dictation from reading book, short sentences.
	Standard VII.	The same, with addition of verse.	A short theme or letter.	Vulgar and Decimal Fractions.	Asia & Europe.	Ceylon, outlines of principal periods.	Clear and intelligent reading with translation into vernacular.	To write a translation from any vernacular book approved by the Department.
	Standard VIII.	Explanation of passage from a classical work, such as Ummagga-jâtaka.	An essay in composition.	Interest, simple and compound, and discount, with exercises on all the foregoing rules.	The World.	Ceylon.	The same, advanced proficiency.	Same, advanced proficiency.

1.—Reading may be tested in the ordinary class book, if approved by the Inspector; but the books must be of reasonable length and difficulty and unmarked. Every class ought to have two or three sets of reading books. Managers are requested to send a copy of all reading books used, to the Department, with an intimation of the standard for which they are intended.

2.—Copy-writing is to be done on paper in the presence of the Inspector.

3.—In Anglo-Vernacular Schools passes for Vernacular Grammar of the same value as other passes will be allowed, the subjects for Sinhalese schools being;—*Standard VI.*—Warnaritiya, pp. 29—46, or equivalent portions of the Sinhalese Grammars of Rev. S. Coles or Mr. Johannes. *Standard VII.*—Warnaritiya, pp. 25—54. *Standard VIII.*—The general application of grammatical rules to classical literature. In Tamil schools an equivalent will be accepted in any approved grammar.

4.—Under the head of "Reading" the following alternative subjects will be accepted. *Standard VI.*—To read at sight, with comprehension, a passage from a vernacular newspaper, public notice, school manual or other book or document in correct modern vernacular, selected by the examiners. *Standard VII.*—Good fluent reading at sight, with comprehension, of a fairly-written letter or manuscript in correct modern vernacular. *Standard VIII.*—Reading a letter or document written in ordinary current vernacular hand-writing.

* Vernacular.

Schedule B.

STANDARDS of Examination for Vernacular Schools.

		Reading.	Writing.	Arithmetic.	Geography.	History.
PRIMARY.	Standard I.	A few sentences from a First book distinctly and accurately pronounced	To form letters on slate or black-board.	Notation up to 999. Addition up to 20, and subtraction of digits.		
	Standard II.	A few sentences from a Second reading book slowly and distinctly read.	To write to dictation short sentences out of the reading book. Copy-writing to be shown, large hand only.	Simple addition and subtraction of numbers of not more than four figures. Multiplication table to 3 times 12.		
	Standard III.	Clear and intelligible reading from a Third book.	To write a connected passage from the reading book containing two or three sentences. Copy-writing to be shown, large hand only.	Multiplication and division with miscellaneous questions in the four rules.		
	Standard IV.	Good and intelligent reading from a Fourth book.	Dictation from reading book. Round hand copy-writing.	Use of rupees and cents. bills of parcels, simple problems.	Definitions and Ceylon.	
	Standard V.	Good and intelligent reading with questions to show comprehension of sentences read (Fourth book.)	Dictation from reading book. Small hand copy-writing.	Reduction of common weights and measures and their application to foregoing rules.	Same, with outlines of the World.	
MIDDLE.	Standard VI.	Good fluent reading, with explanation from a classical work in prose.	Writing from memory the substance of a short narrative read out twice. Spelling, handwriting, and grammar to be considered.	Simple and compound proportion. Use of English money.	Asia.	
	Standard VII.	The same, with addition of verse.	A short theme or letter.	Vulgar and Decimal Fractions.	Asia and Europe.	Ceylon, outlines of principal periods.
	Standard VIII.	Explanation of a passage from a classical work, such as Ummaga-jâtaka.	An essay in composition.	Interest, simple and compound, and discount, with exercises on all the foregoing rules.	The World.	Ceylon.

1.—Reading may be tested in the ordinary class book, if approved by the Inspector; but the books must be of reasonable length and difficulty and unmarked. Every class ought to have two or three sets of reading books. Managers are requested to send a copy of all reading books used, to the department, with an intimation of the standard for which they are intended.

2.—Copy-writing is to be done on paper in the presence of the Inspector.

3.—In Middle Vernacular Schools passes for grammar will be allowed of the same value as other passes, the subjects for Sinhalese schools being:—*Standard VI.*—Warnaritiya, pp. 29—46, or equivalent portions of the Sinhalese Grammars of Rev. S. Coles or Mr. Johannes. *Standard VII.*—Warnaritiya, pp. 25—54, or equivalent portions of the Sinhalese Grammars of Rev. S. Coles or Mr. Johannes. *Standard VIII.*—The general application of grammatical rules to classical literature. In Tamil schools an equivalent will be accepted in any approved grammar.

4.—Under the head of "Reading" the following alternative subjects will be accepted:—*Standard VI.*—To read at sight, with comprehension, a passage from a vernacular newspaper, public notice, school manual, or other book or document in correct mordern vernacular, selected by the Examiners. *Standard VII.*—Good fluent reading at sight, with comprehension, of a fairly-written letter or manuscript in correct mordern vernacular. *Standard VIII.*—Reading a letter or document written in ordinary current vernacular hand-writing.

Schedule F.

VALUE of Passes, English Schools.

	Reading.	Writing.	Arithmetic.	Geography.	History.	TOTAL.
	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.
Standard I. ...	2 0	2 0	2 0	—	—	6 0
do. II. ...	2 0	2 0	2 0	—	—	6 0
do. III. ...	2 50	2 50	2 50	—	—	7 50
do. IV. ...	2 50	2 50	2 50	2 50	—	10 0
do. V. ...	3 0	3 0	3 0	3 0	3 0	15 0
do. VI. ...	3 0	3 0	3 0	3 0	3 0	15 0
do. VII. ...	3 50	3 50	3 50	3 50	3 50	17 50
do. VIII. ...	4 0	4 0	4 0	4 0	4 0	20 0

In girls' schools a pass in "work" is of the same value as a pass under other heads.

Schedule G.

VALUE of Passes, Vernacular and Anglo-Vernacular Schools.

	Reading.	Writing.	Arithmetic.	Geography.	Grammar.	History.	VERNACULAR.	ANGLO-VERNACULAR.		
							Total.	English Reading.	English Writing.	Total.
	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.
Standard I. ...	1 50	1 50	1 50	—	—	—	4 50	—	—	—
do. II. ...	1 50	1 50	1 50	—	—	—	4 50	—	—	—
do. III. ...	2 0	2 0	2 0	—	—	—	6 0	—	—	—
do. IV. ...	2 0	2 0	2 0	2 0	—	—	8 0	—	—	—
do. V. ...	2 0	2 0	2 0	2 0	—	—	8 0	2 0	2 0	12 0
do. VI. ...	2 50	2 50	2 50	2 50	2 50	—	12 50	2 50	2 50	17 50
do. VII. ...	2 50	2 50	2 50	2 50	2 50	2 50	15 0	2 50	2 50	20 0
do. VIII. ...	2 50	2 50	2 50	2 50	2 50	2 50	15 0	2 50	2 50	20 0

In girls' vernacular and anglo-vernacular boarding schools, the value of each pass is double the above sums.
In all girls' schools a pass in "work" will be of the same value as a pass under other heads.
In C. schools the value of a pass is the same as the value of a pass in the corresponding standards of A. schools.
Capitation below Standard I.—In (A) schools, one rupee; in (B) schools, fifty cents.

Schedule H.

Form of Certificate from Managers to be forwarded to Director of Public Instruction, on registration of Pupil Teachers.

SIR,—I HAVE the honour to inform you that I have this day nominated A. B. as pupil teacher in the school, believing ( ) to be well qualified for the office in respect of health, character, habits and parentage.

I further certify that ( ) passed the standard in Reading, Writing, Arithmetic, and at the examination of school on day of 18

I am, &c.,
M. N.
Manager.

Registered this day of 18 No.

Director of Public Instruction.

(On the reverse)

PUPIL TEACHER'S CERTIFICATE.

First Examination.

I hereby certify that has satisfied the requirements of the Code.
(Date)
Manager. Inspector.

Second Examination.

I hereby certify that has satisfied the requirements of the Code.
(Date)
Manager. Inspector.

Third Examination.

I hereby certify that has satisfied the requirements of the Code.
(Date)
Manager. Inspector.

Note.—After the third examination this certificate is to be exchanged for a provisional teacher's certificate.

Schedule I.

QUALIFICATIONS and Certificates required of Pupil Teachers in Grant-in-aid English schools. The conditions of registration are stated in the Code.

	General Subjects of Examination.	Additional Subjects.	School Management.	Certificates of Manager and Inspector.
First year ...	All subjects assigned to VIth standard	Elementary composition. Map drawing, Ceylon	To give a reading lesson to any class not higher than IVth standard	According to Form.
Second year ...	All subjects assigned to VIIth standard	Same, map drawing, Asia	To give a lesson in reading, writing or arithmetic to any primary class	Same.
Third year ...	All subjects assigned to VIIIth standard	Same, map drawing, World	Increased skill in teaching any primary school in all standards. Written examination on duties of monitors	Same.

Schedule J.

QUALIFICATIONS and Certificates required of Pupil Teachers in Grant-in-aid Vernacular and Anglo-Vernacular schools. The conditions of registration are stated in the Code.

	General Subjects of Examination.	Additional Subjects.	School Management.	Certificates of Manager and Inspector.
First year ...	All subjects assigned to VIth standard	Elementary composition. Map drawing (outlines of Ceylon and principal towns.)	To give a reading lesson to any class not higher than IVth standard	According to Form
Second year ...	All subjects assigned to VIIth standard	Same, more advanced, Ceylon in detail.	To give a lesson in reading, writing and arithmetic to any primary class	Same.
Third year ...	All subjects assigned to VIIIth standard	Same, more advanced, outlines of geography of the World.	The same, with a lesson in geography. Written examination on all the duties of monitors	Same.

Pupil teachers in Vernacular schools will be examined in the standards of vernacular schools only. Pupil teachers in anglo-vernacular schools in the standard of anglo-vernacular schools.

Schedule K.

School 18 .

I hereby certify that has fulfilled the duties required of him with punctuality, diligence, obedience and intelligence, and that to the best of my knowledge and belief his moral character has been uniformly good.

Manager.

Schedule L.

QUALIFICATIONS and Certificates of Students in Grant-in-Aid Training Schools.

	Certificate.	Reading.	Writing.	Arithmetic.	Geography.	History.	School Management.
For Admission.	Certificate of Manager.	Reading with fluency and expression from a classical book with grammatical analysis.	An essay in composition.	As for VIIIth Standard.	The World.	Ceylon.	Duties of Monitors.
First year's Examination.	Same.	Same, with advanced proficiency.	Same.	Same, more difficult examples.	Distribution of land and water on the earth's surface, advanced proficiency in political geography of the World.	Same, with outlines of the great events of the history of the World. *	To give lessons in reading, writing or arithmetic to a VIth standard class. Written papers on school management.
Second year's Examination.	Same.	Same, with advanced proficiency	Same.	Same.	Advanced proficiency in physical and political geography of the World.	Same, advanced proficiency.	To teach a VIIth standard class. Written papers on school management and method.

* NOTE.—It is the intention of the Department to publish immediately an adaptation of Lethbridge's *World's History* for Indian Schools.

Candidates for anglo-vernacular certificates will be required to pass, for admission, in the English subjects required for the VIIIth standard in anglo-vernacular schools, and in the subsequent examinations will be required to teach, in the first year, a VIth standard class in English, and, in the second year, a VIIth standard class, to the satisfaction of the Inspector.

Schedule M.

The names of the children to be examined in each standard must be entered upon a form prepared for the purpose, termed a Report Slip ; each Report Slip bearing the following declaration and particulars to be signed by the manager of the school, and handed to the Inspector previously to the examination :—

I hereby certify and declare that all the children whose names are herein entered to be examined for a grant have received not less than nine months' actual instruction in this school during the twelve months immediately preceding the date thereof ; and that the conditions laid down with respect to the standard in which they are now offered for examination have been strictly complied with, and that, to the best of my knowledge and belief, no one of them has passed the examination in this or in a higher standard, in this or in any other school.

Number on List.

Average attendance for twelve months preceding the examination.

A. B.
Manager.

SPECIMEN REPORT SLIP.

Number.	Name.	Age.	Date of admission to school.	Number of attendances since last examination.	Under what standard last examined.	Reading.	Writing.	Arithmetic.	Geography.	Grammar.	History.	Needle-work.
			Y M									

Schedule N.

ENGLISH SCHOOLS.

Complete High School.
- High School ... Senior Local Examination / Junior Local Examination / Examination in specific subjects, Schedule C.
- Middle School... VIII. Standard / VII. do. / VI. do.
- Primary School: V. do. / IV. do. / III. do. / II. do. / I. do.

Complete Middle School.
- Middle School ... VIII. Standard / VII. do. / VI. do.
- Primary School: V. do. / IV. do. / III. do. / II. do. / I. do. / Capitation

VERNACULAR SCHOOLS.

High School. ... Classical Sinhalese or Tamil Literature.

Vernacular Middle Schools in which English is taught in Standards V., VI., VII., and VIII. are called Anglo-Vernacular Schools.

NOTIFICATION.

THE following additions and amendments notified in the *Government Gazette* of 11th August, 1882, are incorporated in the Code for 1883.

CHAS. BRUCE,
Director.

Issue of Licenses to teach in Grant-in-aid Schools.

Notice is hereby given that licenses will be issued to teachers in grant-in-aid schools on the following conditions :—

A.—Licenses will be of two classes. Licenses of the second class will entitle the holder to hold an appointment as head teacher in a primary vernacular school. They will be issued to candidates who passed a satisfactory examination in the following subjects :—

Reading.—Good fluent reading, with comprehension, of a vernacular newspaper, public notice, a school manual, or other book or document printed in correct modern Tamil or Sinhalese.

Writing.—To write a specimen of the penmanship used in setting copies of text-hand and small-hand ; dictation.

Arithmetic.—As for VI. Standard of vernacular schools, with vulgar fractions.

Geography.—Ceylon and Asia.

School Management.—Teaching a standard not higher than Standard IV. in the presence of the Examiner. Method of keeping school registers. Examination in the Code for Grant-in-aid schools.

B.—Licenses of the first class will entitle the holder to hold an appointment as head master of a middle, vernacular, or anglo-vernacular school. They will be issued to candidates who pass a satisfactory examination in the following subjects :—

Reading.—Reading with fluency and expression from a classical vernacular book with grammatical analysis.

Writing.—A short essay or letter ; to write a specimen of the pensmanhip used in setting copies.

Arithmetic.—As for Standard VIII.

History.—History of Ceylon.

Geography.—As for Standard VIII.

School Management.—(1) To teach a class in the presence of the Inspector ; (2) To answer questions in writing on the following subjects :—

a. The different modes of organizing a school ;
b. The keeping of registers ; the Code ;
c. Notes of lessons ; questions of discipline.

Candidates for anglo-vernacular licenses will be required to pass in the English subjects required for the VIIIth Standard in anglo-vernacular schools.

The first examination for licenses will be held in December, 1883, at such centres as shall be found most convenient for the candidates.

In accordance with the above regulations the following amendment has been made in articles 38, 50, and 51 of Code :—

After the word "certificate" read the words "or license."

Notice is also given that in Schedules D. and E. under the head of "Reading" the following alternative subjects will be accepted :—

Standard VI.—To read at sight, with comprehension, a passage from a vernacular newspaper, public notice, school manual, or other book or document in correct modern vernacular, selected by the Examiners.

Standard VII.—Good fluent reading at sight, with comprehension, of a fairly-written letter or manuscript in correct modern vernacular.

Standard VIII.—Reading a letter or document writtenin ordinary current vernacular handwriting.

This amendment will take effect from the 1st of January, 1883.

XXIV.—1882.

VILLAGE COMMUNITIES ORDINANCE AMENDMENT BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance further to amend the Village Communities Ordinance, 1871."

Ordered by the Legislative Council to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

EXTRACT from the Minutes of the Legislative Council, dated 4th October, 1882.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled :

"An Ordinance further to amend the Village Communities Ordinance, 1871."

The Hon. J. DOUGLAS, C.M.G., Colonial Secretary.
The Hon. C. L. FERDINANDS, Acting Queen's Advocate.
The Hon. F. R. SAUNDERS, Government Agent, Western Province.
The Hon. J. F. DICKSON, Government Agent, Central Province.
The Hon. J. VAN LANGENBERG, }
The Hon. P. RÁMA-NÁTHAN, } Unofficial Members.
The Hon. A. L. DE ALWIS, }

VILLAGE COMMUNITIES ORDINANCE AMENDMENT BILL.

REPORT.

THE Sub-Committee appointed by the Legislative Council to report upon the draft of "An Ordinance further to amend the 'Village Communities Ordinance, 1871,'" have given much consideration to the provisions of this Bill.

Certain alterations of form and wording are suggested in clauses 1, 2, 5, 7 and 8, which, as will be seen on reference to the amended draft which accompanies this report, tend to simplify the measure, and to bring its wording into greater accordance with the Ordinances of 1871 and 1880, but do not affect its provisions.

The Sub-Committee have devoted great attention to clause 4—the most important clause in the Bill—and recommend, in the first place, the addition of a third sub-section giving power to make rules for the collection of the tolls leviable under clause 3.

Much stress has been laid by the Government Agents of the Western and Central Provinces upon the desirability of extending the powers of the Village Communities so as to include that of making, by communal labour, village roads, giving means of access for carts from the main or minor roads to their villages. The system has, the Sub-Committee are assured, already been tried in the Western and North-Central Provinces with very beneficial results, and by consent of the inhabitants; but it is understood that Government has been reluctant to give compulsory powers for the working of such a system for fear of its being abused by the utilising of village labour upon works of a different class from those contemplated, and which should include only the clearing and levelling of natural cart-tracks through the jungle.

The Sub-Committee have drafted a sub-section (No. 4), with the express object of meeting this apprehension, and recommend it for the approval of the Council.

The Sub-Committee also recommend that Government should take into consideration the expediency of giving validity to certain bye-laws on the subject of the repair and maintenance of village tanks, the repair and maintenance of village canals, and the levying of fees in respect of markets which have, they are assured, been already brought into beneficial operation in many districts with the sanction of the Governor in Executive Council, but have recently been declared to be *ultra vires*. The rules relating to village tanks are of special importance to a village community, and fall within the intention of the principal Ordinance.

In reference to clause 6, the Sub-Committee are strongly of opinion that in making any appointment under this clause, the wishes of the inhabitants should be ascertained, and, as far as possible, deferred to by the Government Agent. An addition to the clause to that effect would have been recommended but that it appeared to complicate the working of the clause.

The Sub-Committee are unanimous in considering that the powers proposed in clause 9 to be given to vary or alter, without previous reference to the Village Communities, rules already passed, are not in consonance with the intentions of the principal Ordinance. Upon the question of giving the Governor in Executive Council power to cancel or annul such rules, the Sub-Committee are divided, the majority considering such a power out of keeping with the constitution of village self-government, while the minority are of opinion that occasion might arise when the exercise of such power would be desirable.

Subject to the above observations, the Sub-Committee recommend the Bill for the sanction of the Legislative Council.

Division on the question of the retention of clause 9 as amended.

For.	*Against.*
The Lieutenant-Governor.	The Government Agent, Western Province.
The Hon. J. VanLangenberg.	The Government Agent, Central Province.
	The Hon. P. Ráma-Náthan.
	The Hon. A. L. De Alwis.

J. DOUGLAS.
C. L. FERDINANDS.
F. R. SAUNDERS.
J. F. DICKSON.
J. VANLANGENBERG.
P. RA'MA-NA'THAN.
A. L. DE ALWIS.

Legislative Council Chamber,
Colombo, 23rd October, 1882.

XXV.—1882.

PROLONGATION OF THE FRENCH MAIL STEAMERS ORDINANCE.

DESPATCH

FROM THE

RIGHT HON. THE EARL OF KIMBERLEY

REQUESTING the prolongation for another year of Ordinance No. 7 of 1881, intituled "An Ordinance to make temporary provision for securing the Status of French Mail Steamers within the Ports of this Colony."

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

FRENCH MAIL STEAMERS.

The Right Hon. the EARL OF KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

No. 345.—*Ceylon.* Downing-street, 30th September, 1882.

SIR,—WITH reference to my despatch No. 67 of the 25th of February last, conveying Her Majesty's most gracious confirmation of Ordinance No. 7 of 1881 for making temporary provision for securing the Status of French Mail Steamers at the Ports of the Colony, I have the honor to remind you that this Ordinance expires on the 31st of December next, and to request that you will take the necessary steps for continuing it for another year.

2. The enclosed copy of a letter from the Foreign Office will explain to you why it has been found necessary for the Ordinance to be again extended.

I have, &c.,

KIMBERLEY.

(Enclosure.)

The FOREIGN OFFICE to the COLONIAL OFFICE.

COPY. Foreign Office,
27th September, 1882.

SIR,—I HAVE laid before Earl Granville your letter of the 20th instant respecting the temporary Ordinances passed in Ceylon and the Straits Settlements for securing the privileges conferred on the French Mail Steamers by the Postal Convention; and, in reply, I am directed to request that you will inform the Earl of Kimberley that in Lord Granville's opinion the Ordinances above referred to should be renewed, as, even if it should eventually be decided to terminate the Conventions, twelve months' notice will be required.

I am to add that on this point a separate letter will be addressed to you.

I am, &c.,

J. PAUNCEFOTE.

XXVI.—1882.

THE MEDICAL WANTS ORDINANCE AMENDMENT ORDINANCE, 1881.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to amend 'The Medical Wants Ordinance, 1880,' and to repeal The Medical Wants Ordinance, 1880, Amendment Ordinance, 1881."

Ordered by the Legislative Council to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

EXTRACT from the Minutes of the Legislative Council, dated 8th November, 1882.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled :

"An Ordinance to amend 'The Medical Wants Ordinance, 1880,' and to repeal. 'The Medical Wants Ordinance, 1880, Amendment Ordinance, 1881."

The Hon. J. DOUGLAS, C.M.G., Colonial Secretary.
The Hon. C. L. FERDINANDS, Acting Queen's Advocate.
The Hon. J. F. DICKSON, Government Agent, Central Province.
The Hon. P. RÁMA-NÁTHAN,
The Hon. W. W. MITCHELL,
The Hon. E. J. YOUNG,
} Unofficial Members.

MEDICAL WANTS BILL.

THE Sub-Committee appointed by the Legislative Council to consider the provisions of "An Ordinance to amend 'The Medical Wants Ordinance, 1880,' and to repeal 'The Medical Wants Ordinance, 1880, Amendment Ordinance, 1881,'" have met and examined the draft in question, and have the honour to report as follows :—

It being proposed by Mr. Young to insert in clause 4, after the word "cinchona" in line 9, the words "and all other produce exported in like proportion," this was ruled by the Chairman to be contrary to the principle of the Bill, which had already been affirmed on a division by the Council. The motion was therefore not put.

In regard to clauses 4 and 5 a protest was handed in by the Hons. Messrs. Mitchell and Young, which is appended to this report.

Upon consideration of clause 8 it was moved by the Lieutenant-Governor to add the following proviso to the clause: "Provided that whenever any hospital shall be appointed a district hospital under the principal Ordinance, or a dispensary under this Ordinance, any residences attached or appertaining thereto shall, if ordered by the Governor to be taken over, vest in and become the property of the Crown for the purposes of this Ordinance." Motion carried.

It was then proposed by Mr. Young, seconded by Mr. Mitchell, to insert after clause 9 a new clause, as follows :—

"The existing hospitals, dispensaries, and buildings connected therewith, together with any residences for the medical staff that have been provided, shall be taken over and paid for by Government at their present value."

This being opposed, the following division was taken :—

For.	*Against.*
Mr. Young,	The Government Agent, Central Province,
Mr. Mitchell.	The Queen's Advocate,
	The Lieutenant-Governor.

The motion was therefore lost.

J. DOUGLAS.
C. L. FERDINANDS.
JOHN F. DICKSON.
P. RA'MA-NA'THAN.
W. W. MITCHELL.
EDWD. J. YOUNG.

Legislative Council Chamber,
Colombo, 16th November, 1882.

PROTEST.

WE desire to state that we consider it altogether wrong to provide a special fund to defray the cost of the medical care of labourers on estates, by imposing export duties, and that the cost of the same should be paid from the general revenue.

We cannot, therefore, acquiesce in the provisions of clauses 4 and 5 of this Ordinance.

W. W. MITCHELL.
EDWD. J. YOUNG.

XXVII.—1882.

TENANCY BILL.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance to facilitate the recovery of possession of Tenements after due determination of the Tenancy."

Ordered by the Legislative Council to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

EXTRACT from the Minutes of the Legislative Council, dated 1st November, 1882.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled:

"An Ordinance to facilitate the recovery of possession of Tenements after due determination of the Tenancy."

The Hon. C. L. FERDINANDS, Acting Queen's Advocate.
The Hon. W. D. WRIGHT, Treasurer.
The Hon. F. R. SAUNDERS, Government Agent, Western Province.
The Hon. J. VANLANGENBERG, }
The Hon. P. RÁMA-NÁTHAN, } Unofficial Members.
The Hon. A. L. DE ALWIS, }

THE SMALL TENEMENTS BILL, 1882.

REPORT.

The Sub-Committee appointed by the Legislative Council to consider the draft of an Ordinance intituled "An Ordinance to facilitate the recovery of possession of tenements after due determination of the tenancy" have the honor to report as follows:—

It was intimated to the Sub-Committee by the Queen's Advocate that the Government would not be prepared to accept the Bill unless its operation were restricted to houses and other buildings lying within the limits of "towns," and yielding a rental not exceeding Rupees two hundred and fifty a year. The Hon. Mr. Ráma-Náthan, the proposer of the Bill, accepted these limitations.

The Sub-Committee recommend that the benefits of the Bill should be extended to the Municipalities of Colombo, Kandy and Galle; to the towns appearing in the schedule of the Local Boards of Health and Improvement Ordinance, 1876, and in Ordinance No. 21 of 1877, and to such other towns as the Governor, with the advice of the Executive Council, may determine.

The limitation of the Bill to towns, many of which are far removed from the seats of District Courts, renders it undesirable to give jurisdiction to those Courts. The Sub-Committee believe that the facilities afforded by the Bill will be more generally availed of, if jurisdiction were conferred upon Courts of Requests.

These and other recommendations affecting the details of the Bill appear on the draft Ordinance hereto annexed. It has been thought advisable to append in a schedule of forms the precedents to be followed in the procedure enacted by this Ordinance.

C. L. FERDINANDS.
W. D. WRIGHT.
F. R. SAUNDERS.
J. VANLANGENBERG.
P. RA'MA-NA'THAN.
A. L. DE ALWIS.

Legislative Council Chamber,
Colombo, 22nd November, 1882.

XXVIII.—1882.

SUPPLY BILL, 1883.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for making provision for the Contingent Services for the year 1883."

Ordered by the Legislative Council to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

EXTRACT from the Minutes of the Legislative Council, dated 11th October, 1882.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled:

"An Ordinance for making provision for the Contingent Services for the year 1883."

The Hon. J. DOUGLAS, C.M.G., Colonial Secretary.
The Hon. W. H. RAVENSCROFT, Auditor-General.
The Hon. J. STODDART, Acting Surveyor-General.
The Hon. P. RÁMA-NÁTHAN, }
The Hon. W. W. MITCHELL, } Unofficial Members.
The Hon. F. M. MACKWOOD, }

SUPPLY BILL, 1883.

REPORT.

In view of the fact that the estimates of expenditure for the coming year have, during the past month, been subjected to special enquiry and consideration at the hands of a Select Committee appointed by the Legislative Council for the purpose of reviewing and reporting on the public expenditure of the Colony, the Sub-Committee appointed to consider the draft of an Ordinance to make provision for the Contingent Charges of the year 1883 do not deem it necessary to do more than call attention to the various changes which have since been proposed by Government in the Bill, and to its more salient points of divergence from the Estimates of the current year. These various points will be noticed under the Heads of Service to which they belong.

No. 1.—ESTABLISHMENTS.

1.—CIVIL.

His Excellency the Governor.

It has been determined to abolish the post of Subadar of the Mounted Orderlies, which is found to be no longer recognized by the existing Army Discipline and Regulation Acts. The saving which will thus be effected amounts to Rs. 935.

Secretariat.

Opportunity has been taken of the retirement of De Soyza, Maha Mudaliyár, to abolish the post of Sinhalese Translator and Petition Clerk, making an addition of Rs. 200 to the salary of the Petition Clerk. The nett saving will be Rs. 1,100.

Provincial Agencies.

WESTERN PROVINCE.

The following items may be omitted :—

20 Peace Officers, at Rs. 90	...	Rs. 1,800
1 Do. „ 45	...	„ 45
Allowance to Fisher Headmen	...	„ 90

as it appears that these allowances are at present undrawn, and are no longer required.

SOUTHERN PROVINCE.

It is proposed to abolish the office of Interpreter to the Police Court of Hambantota, and to appoint in lieu thereof a Muhandiram for the Mágam Pattu on the same salary—Rs. 600. The necessity for this new appointment is explained to have arisen through the recent development of the Pattu, which has followed the opening up of the lands under Tissamaharámá.

NORTHERN PROVINCE.

A saving of Rs. 1,500 will be effected in the establishment of the Jaffna Kachchéri through the abolition of the second Interpretership and the falling in of the special allowance of Rs. 600 to Sa-erimuttu Mudaliyár.

CENTRAL PROVINCE.

Provision is required for continuing the temporary employment of a Land Clerk at Rs. 480. who has been employed for some time past on remunerative work in the Land Department of the Kandy Kachchéri in connection with the settlement of land claims and encroachments.

Public Works Department.

It has been found necessary to provide an additional clerkship at Rs. 800 for the performance of duties in connection with grant-in-aid roads. These duties have hitherto been performed by the clerical staff of the Provincial Road Committee of the Central Province, but the Committee has declined to continue the arrangement on the ground that the provisions of the Thoroughfares Ordinance do not authorise the application of their funds for purposes connected with grant-in-aid roads.

The cost of the establishment of this department shews a reduction of Rs. 42,730 as compared with the estimates of the current year.

Survey Department.

A reduction of Rs. 11,344 has been effected in this Department by the abolition of the special staff for chena surveys. Other arrangements will be made for continuing the work of this branch.

Customs Department.

The sum of Rs. 150 allowed to the Galle Customs, for extra attendance of officers, should be omitted.

Post Office.

The contemplated retirement of Captain Durnford renders it possible to abolish the office of Deputy Postmaster-General, Kandy. The similar office at Galle has already been abolished, and in lieu of these two appointments should be substituted a second Postal-Telegraph Assistant at Rs. 2,000, and a third at Rs. 1,500. These offices are now filled by Messrs. Macready and Twynam.

The above changes will effect a saving of Rs. 3,000 on the cost of the establishments, as included in the estimates under consideration.

Public Instruction.

The Sub-Committee regret that the present state of the finances of the Colony does not allow them to support the proposal for a special increase of salary, by way of personal allowance, to Mr. Bruce, the able Director of Public Instruction. At a time when a Select Committee is engaged with schemes of retrenchment which cannot but prejudicially affect the future prospects of a large number of Civil Servants, it would appear out of place to grant any special increase to existing salaries.

SERVICES EXCLUSIVE OF ESTABLISHMENTS.

No. 3.—REVENUE SERVICES.

It is proposed to include under the head of Stamps the following items :—

Cost of Postal Labels	...	Rs. 3,000
„ Telegraph „	...	„ 2,000
„ Revenue „	...	„ 3,500

transferring this amount of Rs. 8,500 from the heading " Miscellaneous Services" (Crown Agents in London, Miscellaneous), to which the cost of these labels has hitherto been charged.

No. 7.—EDUCATION.

A sum of Rs. 500 has been inserted twice over, by mistake, for inspecting Science Schools, this amount may therefore be omitted.

No. 8.—HOSPITALS AND SANITATION.

In consequence of the low rates at which tenders have been secured for the supply of diets to the hospitals throughout the Island, the Principal Civil Medical Officer has been able to reduce his estimates for this service by sums amounting in the aggregate to Rs. 10,000.

No. 12.—CONVEYANCE OF MAILS.

The provision for the Galle and Colombo mail service may be reduced by Rs. 3,000, the service having recently been re-let at Rs. 6,000 instead of Rs. 9,000, as provided in the estimates.

No. 13.—WORKS AND BUILDINGS.

On the vote of Rs. 10,000 for completing the wall round the new Lunatic Asylum, it being moved to omit this item, the following division was taken :—

Against.	*For.*
Mr. Mackwood,	The Surveyor-General,
Mr. Mitchell.	„ Auditor-General,
	„ Lieutenant-Governor.

No. 14.—ROADS, STREETS, BRIDGES, AND CANALS.

Reductions in the sums provided for maintenance of various roads, amounting to Rs. 21,056, have been made by the Director of Public Works since the estimates were submitted.

It is proposed to insert under the head of "Additions and Improvements to Roads" the two following items:—

Rs. 5,000 for repairing the footways in Main-street, Colombo. The footway is reported to be in a dangerous condition, and as the street was taken over some years ago by the Government from the Municipality, the cost of the repairs has to be defrayed from general revenue.

Days' labour 5,040, for bridging rivers in Ambagamuwa between Maskeliya and Ginigathena. The Provincial Road Committee of the Central Province propose to undertake this desirable work.

It is also proposed to increase by Rs. 2,000 the appropriation for the maintenance of the canal from Puttalam to Toppu. The vote for this canal has been much reduced of late years, and increased repairs will be required in 1883 to preserve this important means of communication free from obstruction.

No. 15.—MISCELLANEOUS SERVICES.

In view of the important reductions which have been made in the estimates, it is proposed to insert under this heading a sum of Rs. 5,000 towards bringing into operation the Land Registration Ordinance No. 4 of 1877.

Also to increase the vote for Harbour services to the Master Attendant, Batticaloa, by Rs. 2,212 for the purpose of supplying telephonic communication between the flagstaff at the Bar and the Kachchéri, a distance of four miles. It has been found impossible to maintain the flagstaff on the eastern side of the Bar, where alone it was visible from the town of Batticaloa, and it has been now removed to a secure site to the west of the Bar, whence, however, it cannot be made visible at the town. It therefore becomes necessary to provide other means for making known the movements of the shipping to the town.

The result of the changes proposed in this Report will be an addition to the estimates of sums amounting to Rs. 15,492, deductions amounting to Rs. 45,676, and a nett decrease of Rs. 30,184.

The Sub-Committee have not found it possible, in dealing with these estimates, to take into consideration the recommendations which have been under their consideration as members of the Select Committee on Retrenchment. They take it for granted, however, that when resolutions based upon those recommendations are adopted by the Select Committee and presented to the Legislative Council in a substantive form, every opportunity will be taken of giving to them due consideration and effect.

J. DOUGLAS.
W. H. RAVENSCROFT.
J. STODDART.
P. RA'MA-NA'THAN.
W. W. MITCHELL.
F. M. MACKWOOD.

Legislative Council Chamber,
Colombo, 21st November, 1882.

APPENDIX.

LIST of Unexpended Balances to be brought forward for expenditure in 1883.

			Rs.	cts.	Rs.	cts.
	1882.	*Supply Bill*, 1882.				
4	January 16	For building a portion of the boundary wall of the new Lunatic Asylum, Colombo	2,000	0		
	1881.					
15	August 26	For bridle path from Haldummulla to Horton Plains ...	10,000	0		
2	October 31	For extension of the Uḍa Pusselláwa road from Amherst to St. Margarets	15,000	0		
	1882.					
243	March 29	For repairing the Kaṭugastoṭa Bridge	500	0		
477	April 21	For necessary repairs to the Pérádeniya Bridge ...	468	0		
494	April 26	For replanking the Piṇ-oya Bridge, Kaṭugastoṭa ...	275	0		
671	September 19	For headworks on ela from the Galoya anicut to the Medagampattu fields	1,000	0	29,243	0
		Supplementary Supply Bill, 1882.				
438	April 26	For certain improvements to the old Lunatic Asylum ...	—		400	0
				Rs.	29,643	0

J. C. CHURCHILL,
Director of Public Works.

Colombo, 9th October, 1882.

XXIX.—1882.

SUPPLEMENTARY SUPPLY BILL, 1882.

REPORT of a SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to report upon the Bill intituled "An Ordinance for making provision for the Supplementary Contingent Charges for the year 1882."

Ordered by the Legislative Council to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

EXTRACT from the Minutes of the Legislative Council, dated 22nd November, 1882.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled :

"An Ordinance for making provision for the Supplementary Contingent Charges for the year 1882."

The Hon. J. DOUGLAS, C.M.G., Colonial Secretary.
The Hon. W. H. RAVENSCROFT, Auditor-General.
The Hon. W. D. WRIGHT, Treasurer.
The Hon. P. RÁMA-NÁTHAN, }
The Hon. W. W. MITCHELL, } Unofficial Members.
The Hon. A. L. DE ALWIS. }

SUPPLEMENTARY SUPPLY BILL, 1882.

REPORT.

THE Sub-Committee appointed by the Legislative Council to report upon "An Ordinance for making provision for the Supplementary Contingent Charges of the year 1882" have given their consideration to the several items which are included in the Bill, as well as to others which it has been found necessary to add thereto since the preparation of the Bill.

No. 1.—ESTABLISHMENTS.

I.—CIVIL.

BOTANIC GARDENS.

The votes amounting to Rs. 1,100 for contingencies in the Botanic Gardens may be omitted, provision having been made for these services in the Supply Bill of 1883.

V.—MEDICAL.

Salary of Medical Inspector of Coffee Districts.—The Sub-Committee understand that it has been necessary to make provision for Dr. Coghill's salary pending a decision as to the arrangements to be finally adopted for the medical care of immigrant labourers in the coffee districts. Dr. Coghill will, the Committee are informed, now retire on pension, the office of Medical Inspector having been abolished.

SERVICES EXCLUSIVE OF ESTABLISHMENTS.

No. 3.—REVENUE SERVICES.

SALT.

Advantage has been taken of a favourable season for the manufacture of salt at Puttalam to bring up the stock in hand, which had fallen undesirably low, to an amount which now approaches a two years' supply. An additional vote of Rs. 21,878 has, therefore, become necessary in the North-Western Province for "cost of manufacture."

The amounts provided in the Eastern Province have also proved insufficient, and an additional vote of Rs. 4,736 will be required.

GRAIN.

In reference to the item of Rs. 5,000 for lands purchased by Government in the Central Province for default of paying tax, it has been explained to the Sub-Committee that some difficulty has been experienced in recovering the paddy commutation tax in this Province, owing partly to the failure of the coffee crops upon which the villagers used to rely for meeting their taxes, and partly to the cheapness of paddy; and in some districts it has been necessary for Government to purchase lands put up for sale in default of payment of tax, both to protect its own interests, and with the object of giving the villagers a further chance of liquidating their arrears.

As the purchase money has in no case been allowed to exceed the amount of the tax due upon any plot of land, the vote is, in reality, a matter of account, being transferred to revenue under the head "Land Revenue" in liquidation of the taxes in default in each case.

CIVIL AND CRIMINAL LAW EXPENSES.

The vote of Rs. 2,000 to the Government Agent of the Western Province may be reduced to Rs. 1,383; it is required to meet the costs incurred in a case where a minor headman, acting under the orders of his superior officer, seized some timber which was being removed in the Kalutara district, and the seizure was pronounced illegal by the local court and by the Supreme Court in appeal.

The vote of Rs. 3,121·50 for the Central Province is for the costs incurred by the Municipality in defending the action brought against them by Messrs. Walker & Co. in respect of the diversion of the waters of Dunumadelawa-oya to the Kandy waterworks. These costs Government undertook to defray.

No. 4.—ADMINISTRATION OF JUSTICE.

The Sub-Committee content themselves with noting the largeness of the supplemental vote required under Administration of Justice. The question of reducing expenditure under this head has not escaped the attention of the Retrenchment Committee.

No. 6.—CHARITABLE ALLOWANCES.

A supplemental vote of Rs. 300 is required in the Southern Province under the above head.

No. 9 A.—POLICE SERVICES.

The provision will have to be increased from Rs. 2,740 to Rs. 3,400 in order to meet additional items under "Hospital Stoppages" and "Rent."

No. 13.—WORKS AND BUILDINGS.

The item of Rs. 400 for alterations to the old Lunatic Asylum should, in the opinion of the Sub-Committee, be struck out and charged to the general vote for repairs to public buildings.

No. 15.—MISCELLANEOUS.

A vote of Rs. 6,732·77 is required, in addition to the vote of Rs. 10,000 already sanctioned, to meet the expenses incurred in securing the representation of the Colony at the recent Melbourne Exhibition. The total expenditure incurred for this purpose amounts therefore to Rs. 16,732·77.

On the other hand, the vote to "Crown Agents, Miscellaneous," may be reduced from Rs. 14,000 to Rs. 7,000.

No. 21.—LANDS TAKEN FOR GOVERNMENT PURPOSES.

A further sum of Rs. 1,400 is required to pay compensation for lands submerged by the Periyakulam and Sirukulam tanks in the Eastern Province when those tanks were repaired. It has not been found possible to arrive at an earlier settlement of those claims.

By the insertion of the changes in the estimates noted above, and of certain minor changes of which it has not been thought necessary to make special mention, the total of the items included in the Supplementary Supply Bill will be raised from Rs. 144,525 to Rs. 159,457·71.

J. DOUGLAS.
W. H. RAVENSCROFT.
W. D. WRIGHT.
P. RA'MA-NA'THAN.
W. W. MITCHELL.
A. L. DE ALWIS.

Legislative Council Chamber,
Colombo, 29th November, 1882.

XXX.—1882.

CORRESPONDENCE

ON THE SUBJECT OF

THE REVISED CODE FOR AIDED SCHOOLS.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

CORRESPONDENCE

ON THE SUBJECT OF

THE REVISED CODE FOR AIDED SCHOOLS.

No. 1.

The Hon. the COLONIAL SECRETARY to the DIRECTOR OF PUBLIC INSTRUCTION.

No. 213. Colombo, 15th August, 1882.

SIR,—I AM directed to refer to you, for your early consideration, the enclosed copy of a letter from Bishop Bonjean.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

Enclosure.

Bishop BONJEAN to Governor Sir J. R. LONGDEN, K.C.M.G.

Chilaw, 8th August, 1882.

RIGHT HON. SIR,—HAVING determined to publish my views regarding the Revised Code for grants-in-aid schools, I have the honour to communicate to Your Excellency in advance the MS. of a paper on the subject which I hope to be able to forward shortly to your Excellency in a printed form.

From a glance at it Your Excellency will be able to form an idea of the weighty nature of the objections I entertain to the present system of grants-in-aid, and to realize how a scheme, in appearance so liberal, constitutes in my mind a departure from those principles of denominational education which were understood to form the basis upon which the Catholic Mission had undertaken to co-operate with Government in this matter of education.

I am anxious that Your Excellency should be in possession of my views some time before I have the honour of an interview with you, in order that the question may be thoroughly gone into.

I hope (D. V.) to be in Colombo some time next week, and will write in time to Your Excellency's Private Secretary to ascertain when it will suit Your Excellency's convenience to receive me.

Meanwhile, I have the honour to remain, &c.,

CHR. BONJEAN, O.M.I.,
Bishop of Medea and Vicar Apostolic of Jaffna.

Sub-Enclosure.

STATEMENT of my objections to the Code for Aided Schools and to other points connected with the Grant-in-aid system.

The system in which, in 1870, I agreed with Sir Hercules Robinson to co-operate, was essentially in His Excellency's, as well as in my own mind, one of *denominational education.* I had for years urged the claims of the Catholics of Ceylon, as tax-payers, to their proper share in the sums yearly allotted to public education from the public funds, for the maintenance of purely Catholic schools—that is, of schools which, whilst they maintained the proper standard of secular education required by Government, were to be entirely Catholic in their management, their teaching staff, their text-books, their discipline, and their spirit. This was based on the condemnation by our Church of all non-Catholic schools, whether sectarian or simply *neutral*, as the word is—that is, non-religious. We have an equal objection to a system under which all religious teaching is severed from secular teaching, as to one the aim of which is to inculcate tenets contrary to the Catholic doctrine.

We hold that no education worth anything can be given the child which is not religious, and that none but a Catholic education can be given a Catholic child. These principles, which are those of the Catholic Church, have been lately re-affirmed in the resolutions of the English Catholic Bishops in their meeting of Low Week this year; and, in Ceylon, I am not more free than they in England to depart from them.

Our position in regard to education is this:—Proselytising non-Catholic children in our schools by holding out to them the bait of secular instruction is no part of our system of evangelization: schools are with us neither *the* nor *a* proper means for the conversion to our faith of non-Catholic children, but only a necessary agency for the instruction of those who are either already Catholic, or have made up their mind to become Catholic; hence, when we are *compelled* by the

force of local circumstances to admit non-Catholic children into our schools, not only do we not begrudge them the guarantee of a conscience clause, but the rule in all our schools is not to admit such to attend religious instruction or to take part in any act of religion except upon the formal request of their parents.

In the second place, we are not schoolmasters, properly speaking, that is, schoolmasters in competition with others, putting up rival schools in opposition to already existing schools. We are before all *the pastors of our flock*, and we become schoolmasters only when the necessity of preserving the faith and morals of our youth makes it incumbent upon us to assume the charge of secular, in order not to give up that of *spiritual* teachers.

Therefore, do we not carry our school operations beyond the pale of our flock; therefore, do we set up no rival school against those whether of Government or of Protestant Missionary Societies, so long as those impart instruction only to non-Catholic children. But, if we are careful not to occupy ground which is not essentially ours, we are equally watchful in guarding our own special ground from all encroachments from without. Hence, whenever there is a small knot of Catholic children requiring secular instruction, neither do we think it proper to debar them from it, nor do we hold it consistent with our duty as Catholic pastors to allow them to seek it in places where, whether from the intended action of the masters or from the nature of the system, they could receive it only with an admixture of much that we consider evil and hurtful; or, what would be equally baneful, to the exclusion of that religious element which, in our view, is the necessary condiment and seasoning of all human knowledge.

Therefore, we proposed that whenever there was a small number of Catholic children requiring secular instruction, which could be obtained only in non-Catholic schools, we should receive for a Catholic school such help, from the educational funds, as the number of our pupils and their proficiency in secular matters would justify; and, considering the principle upon which this was asked, it seemed to us impossible that any fast and hard rule as to average attendance, or as to distance from any existing non-Catholic school, should ever come to be enforced.

This much premised, I pass now to such Articles in the Revised Code as either in themselves or in the practical application of them, seem to me open to criticism and to call for amendment.

Articles 11 *and* 12.—When the grants-in-aid system was first started we were not quite prepared for it; our limited resources in men and money obliged us to defer for some time the opening of the schools our people required. Meanwhile, in more than one place, the Protestant Missionaries stole a march upon us, and they, in numerous instances, planted their schools in the vicinity of our Catholic villages. Eventually, the three-mile rule was enacted, which rendered it impossible for us to open schools for our Catholic children, and was indeed tantamount to compelling their attendance at the Protestant school.

If that rule was to stand in the rigid construction which its terms seemed to convey, it was plainly over with our schools as far as State help went; their participation in the Government grant was no more a matter of principle, it was simply to be the result of a race in which, all higher interests being disregarded, the palm was to be carried off by the swiftest runner, or the more cunning, or the bolder or the wealthier projector.

So I applied to Government, and received the answer which, in order to allay the anxieties I had felt on the subject on the first appearance of the Revised Code, was reprinted at the end of the "Memorandum on the amendments contained in the Revised Code," published by His Excellency's orders in 1880, and which I reproduce here:—

"Some assurance has been asked with regard to the interpretation to be placed on the words 'as a general rule' in clause 12 of the preliminary chapter of the Code.

"As a general rule, no application will be entertained for aid to a boys' school when there already exists a flourishing boys' school of the same class within two miles of the proposed site, without some intervening obstacle, unless the average daily attendance for six months prior to the date of application exceeds sixty.

"In the interpretation of this clause, the Department will continue to be guided by the principle laid down in the letter addressed to Bishop Bonjean by the Colonial Secretary, of 17th February, 1875.

"This rule is intended to put a stop to differences which arise but too often from the competition (very laudable in itself) of the different religious bodies to extend their schools. In accordance with its provisions, if a school occupies the ground among the Buddhists and heathens, assistance will not be given to another school, founded subsequently within the prescribed limits, unless the first school works badly. If, however, there be a Christian religious community of sufficient number for a school, there would be no objection to an application for a grant to a new school, in spite of the fact of there being within the three-miles limit another school conducted on religious principles to which the parents of a large portion of the pupils object, or to which children from religious objection refrain from going. Such a condition of things would be an 'exceptional circumstance'; but every such case would have to be carefully enquired into before the sanction of Government to a grant could be given.

"CHAS. BRUCE, Director."

If the Department is to be at all times "guided by this interpretation," and if the object in publishing the Minute was to give Catholics an "assurance" they had not before its publication, why not make it a standing rule? Interpretations of legal texts pass away and are forgotten, the dry hard text only remains and is law. If, then, the assurance we Catholics are to derive from this interpretation is not fictitious and ephemeral, let it take its place in the body of the law. The matter is of considerable importance, and the Minute puts land-marks which must save in the future much confusion, indecision, inconsistency and disagreeableness.

In fact, two very distinct systems are here laid down which cannot be subjected to one and the same set of regulations:—

1st. We have, in the first place, the *Denominational* system. Wherever there is a "Christian religious community of sufficient number for a school," then, independently of all rules of distance, attendance, &c., and the like, it has a right to Government help in proportion to

its numbers, class and efficacy, without being at all hampered in the choice of its masters, books, teaching and discipline, so long as the secular teaching in it is of the required quality and degree; and this ought to be within the reach of each and every Christian denomination.

2nd. But, if religious societies choose to open schools for children not of their own denomination, then those schools, whether considered in the light of rivals to, or of allies of, the Government schools, ought to be dependent upon the Government system of education for their existence, their organization and their management, and all these ought in turn to be subordinate to the interests of the class from which their pupils are recruited. One thing only is plain with regard to them: they have no right of their own to advance; none, except such as their employers and their customers do willingly recognize. Then Government may accept or refuse, favour or restrict them, just as they find that the general interests of instruction do require: whether viewed in the light of useful competitors or of valuable associates, they may be granted a more or less liberal support according to the nature and extent of their services. But there is one thing they cannot do, and that is to use Government help and money to further the inculcation of their own sectarian religious views upon the poor unwary children they gather in their schools under the sole pretence of imparting to them secular knowledge.

So, for the one class of schools, every freedom compatible with the attainment of secular knowledge. When people have an undoubted right, they ought not to be needlessly hampered in the exercise of it. For the other class, dependence on and subjection to the various interests they pretend to subserve.

So it will be seen that the unreserved adoption of the principle on which the Government Minute rests goes much farther than the question which led to its utterance; in fact, this sheds floods of light on a system of educational policy which has been found practically perplexing, only because it was wilfully left undefined. I will urge its application to other portions of the Code; for the present, I demand that it should be incorporated in Articles 11 and 12.

Articles 14 *and* 15.—As a door open to needful improvement as well as to the correction of past errors, this rule has all my approbation. But, if a stereotype set of rules, which even when convicted of imperfection, could not be altered, is to be deprecated, the confusion which would result from a continuous modification of the rules ought also to be guarded against. In a late correspondence with the Director of Public Instruction, I insisted upon the danger of the constant remodelling of the Code, and upon the necessity, whenever any amendment was contemplated, of giving those interested ample time to consider and criticize it, lest the Code should, I said, "year after year undergo so many and so important and so essential alterations as to come out of the process a totally different scheme from what it was at first expected, intended and understood to be." I asked that all intended modifications should be published in the *Government Gazette* at least six calendar months before the opening of the Sessions of the Legislative Council. Mr. Bruce thought the delay I asked "longer than necessary"; but he admitted that my proposals were "reasonable in principle." I ask, therefore, that Articles 14 and 15 may be so remodelled as to enable all parties concerned to know and discuss in time before the Legislative Session any contemplated alteration in the Code.

Article 20.—On the first appearance of the Code, it struck me, as it did many besides, that the average daily attendance required for a grant to a school was too high. I was assured that in practice this raising of the required average attendance would not work injuriously; but I find it has so worked; and I propose that it be lessened 20 per cent. all round, in all except C. schools, and that in *denominational* schools the average be calculated with reference to the number of school-going children in any particular denomination and place.

Article 26.—In English schools, boys must be received *very* young if they are to get a correct pronunciation and a thorough knowledge of the language. On the other hand, at their first steps in the study of English they require the help of the vernacular, in which every thing has to be explained to them. It follows that their vernacular and English studies must for some time go hand in hand; and justice requires that the labour spent upon enabling them to use their own language as a key to the acquisition of English should not go without its reward, and therefore that they should receive passes in the vernacular in any class or school dependent upon or connected with the English school. It was so before, and it worked satisfactorily.

Article 31*a*.—Whether it was wise to sweep off capitation grants from all English schools is, at least, disputable; anyhow, I repeat here a proposal I have already made, viz., that in all aided English schools there should be alphabet classes with result-payments to correspond to those in Government schools. It was admitted to me that the reason for reducing those grants by one-half in all other schools was one of economy. But when the great disproportion between the cost of educating each pupil in grants-in-aid and in Government schools is considered, my objection remains. For, if economy is to be the order, or if it is the necessity of the day, why should the whole burthen be borne by grants-in-aid schools, instead of being divided between aided and Government schools? As a simple matter of payment for work done, the former rates should be reverted to.

Article 31*b*.—Referring to Schedules F. and G. we find that only one *one* pass is allowed under the head of *writing*, for *handwriting*, *spelling* and *grammar*. These being three quite different subjects, success in one of which may not be necessarily accompanied with success in the two others, each of these should have its own independent pass.

CHAPTER II.

SECTION 1.—*Teachers.*

From the outset, I decidedly set my face against any sort of examination of the teachers in *denominational* schools on the obvious principle "By their fruits thou shalt know them."

Although assured then that nothing of the kind was in contemplation, I lived long enough to read in the New Code a section wholly devoted to regulate that examination. But my views have undergone since no alteration whatever. I hold still that that examination is *useless;* that unless something more substantial is held out to the managers of *denominational schools* than the paltry rewards in section II. it is *unfair;* that, in the long run, those ill-fated managers will be found to have worked for the schools of Government, where salaries and advantages of all sorts are offered to able teachers, with which it were folly for private schools to pretend to keep up. So that, after some time, all our best masters—men trained to their profession at the cost of considerable labour and expense—will be seen, one after the other, to desert their *Alma mater* for Government employment, where work is less, the pay higher, and the hopes of advancement greater. So we may well prepare to repeat mournfully with a slight change the known lines "*Sic nos non nobis.*"

To have made us so to work out our ruin with our own hands has, perhaps, been a masterstroke of policy, but the unfairness of it is too patent to escape the attention of even the most casual and unconcerned observer, and the danger which underlies it is, for all the skill brought to bear against us, no less formidable. This is another instance of how the want of a line drawn between mere *mixed* schools under voluntary management and proper *denominational* schools has led to confusion and to great injustice.

This subject would certainly claim long development, but not to make myself too wearisome, I dismiss it with this brief notice, and pass now over to other points.

I purposely omit the consideration of minor topics which could not be even slightly touched upon without carrying me away into a multiplicity of minute secondary details, and without diverting the reader's attention from the main points at issue.

Among the latter stand foremost the choice of the school books, which I, for my part, have been most careful distinctly to reserve to myself. Certain correspondence which took place on this subject between Sir William Gregory and myself sufficiently attests the jealousy with which I have ever guarded this necessary privilege of my charge from all encroachment; and it at the same time testifies to its recognition by Government. Yet at the foot of Schedules B., D., E., we are met with the ominous words: "if approved by the Inspector"; and on Schedule B. managers are requested "to send a copy of all reading books used to the Department."

These words, of course, must be read in their context, and when so read they seem to refer to the "length and difficulty" of the test only, not to their subject matter.

But further on, in Schedule B., under the head "Reading in Standard VII"., the duty of the manager or teacher of a *denominational* school to keep away from his pupils all books of a nature to *hurt* their faith or morals is ignored. The text is: "Reading with fluency and expression from any newspaper or book brought by the Inspector." Now, it is a standing rule with us that no book or newspaper not approved by the Bishop is allowed to be introduced into any of our schools. I am glad to see that Ministers of other denominations are alive to the grave nature of their responsibility on this score, as clause 3 of a late *Memoranda* of theirs shows, where they demanded that "no book to which a manager shall object with respect to its moral or religious tendencies should be used in examination"; but the reply of the Director to the *Memoranda* leaves one as much in the dark as before with regard to the extension to be given to the words in the schedules which refer to newspapers or books brought into a school.

I freely acknowledge the right in the Department to judge of the simple literary value of a book as a school-text, and of its adaptation to the particular school or class in which it is used; but, objecting to a book on the score of its containing too many religious subjects, so long as the style is of the proper unexceptionable quality, is what seems to me to go beyond the bounds, but what has been done on more than one occasion in our schools.

Since I have mentioned Inspectors, I may as well add a few words respecting them. In the course of some ten years past, I have had to complain of few for what I could note as a gross departure from their line of duty. But I cannot withal say that the scheme of "payment by results" has worked fairly in their hands. Inspectors seem to follow no precise rule in the giving or the refusing of passes. I have seen both done at random, by caprice, under the influence of good or bad humour; very often did I see failure result where I had every reason in the world to rely upon success and *vice versa*. The award of the Inspector is, however, final. I have had instances of well-kept schools getting only a ridiculous average of passes, a result for which no other reason could be assigned but that the Inspector was that day ill-disposed, or that he had at the outset felt offended at something or some one, and had made the penalty to be borne by the whole school. Of late, some Inspectors have let it appear that one of their chief objects was to bring the average of passes low; they have accordingly put hard questions with a view to confuse, have refused passes where passes had been fairly earned, &c., &c., just as though "plucking" were the grand object for which they are sent. Long ago, I asked that some control should be placed on the possible weaknesses of Inspectors; it is high time that something were devised to restrain their impulses, or to correct their hasty awards.

This is a question of money, and all money accounts require to be checked. Now, the cry is for economy; but, it must be remembered that the present depression of the colony affects the resources of individuals, and among those, of managers of schools, just as much as it does the public funds; that there is a compact between the managers and Government that, having fulfilled the conditions accepted by them, they have a strict right to the aid promised by Government; that if the sums allotted to education must be curtailed, justice requires that the retrenchment should not be borne by aided, still less by aided *denominational* schools alone, but by the Government schools also in some fair proportion. It must further be considered that large outlays of money having been made by the managers to meet the requirements of Government, and on the strength of a promise of a certain aid a sort of compact has thus taken place which it is not in the power

of either of the parties to lay aside, and that the aid promised is so much that is due, and ought therefore to be paid, with no grudging hand, in its entirety.

Again, with regard to *denominational* schools, it must be borne in mind that the parents of the pupils, who are tax-payers, have a right that the school where their children are taught and where only they can be taught in conformity with their own conscientious principles, should receive from the educational funds a sum proportionate to that bestowed upon any Government school in the same condition.

And lastly, I would suggest that if the situation of some Christian managers who do not appear to have undergone great expenditure in the putting up or in the conducting of schools for heathen children, but have made the heathen parents pay for all, whilst they have for years received the grants, were fully investigated, that would perhaps lead to some substantial economy; anyhow, it would result in the correction of an abuse.

I cannot bring to a close this hasty sketch without expressing my astonishment at a phenomenon which has long baffled my best endeavours at an explanation. That we Catholics should have had to fight on the field of education with all the Protestant sects to wrest from their hands, as it were, one by one the souls of our Catholic children, is only what we were fully prepared to expect. Those Sectarians, Wesleyans, Independents, Baptists, Anglicans High and Low, whatever their mutual differences, their strifes, and struggles and animosities, are ever found united against the members of the Old Church: Rome is their bug-bear, as clericalism is the European Radical's. They can think of no triumph worthier of themselves than if they can snatch away from the Catholic fold a poor ignorant, unwary Catholic man, woman or child, and make him or her a Protestant, although when so made they have nothing more definite to hand over to him or her in the way of a creed than what this most elastic of all formulas imply:—"Read the Bible and believe what you like." But that the Department of Public Instruction should view us Catholics in the light of rivals on the very field of Catholic education; that in places where there is a majority of Catholics they should plant their neutral schools, and consider every attempt of ours at withdrawing our Catholic children from those schools as unjustifiable acts of opposition to Government, is what, for the life of me, I cannot understand, but what I have had to experience and to deplore.

And why all that antagonism and all that mistrust, when we declare ourselves ready to provide for the secular education of all our Catholic children, and have given the proofs of our ability to do so? Are we to be viewed in the light of opponents to Government, are we not rather to be welcomed as their useful allies, if we relieve them of all care and trouble with regard to the education of Catholics? Have not the Department large fields open before them where they can promote the instruction of the Buddhists, the Hindus, and of all those who value the neutral system of education, without contesting here and there an inch of Catholic ground, where, after all, they do not pretend to be able to do all that has to be done, but where their interference is deprecated on the highest grounds, and cannot show itself without alarming our consciences? We do not cast wistful eyes on fields that are not properly our own, but what is our own we wish to keep; and whilst we give to the religious instruction of our children all the care its paramount importance requires, we humbly hope to keep up with every other school in the Island in the sphere of secular knowledge; for the mean rivalry of school against school, not the healthful competition which aims at progress for the sake of progress, is what we deprecate.

In conclusion, I beg all those into whose hands this paper may fall to consider the strictures in it as levelled against our system of grants in-aid for schools, which I believe to be thoroughly wrong and inconsistent; not as addressed to those who have had to administer it, and from whom, I am happy to say, I have, as a rule, experienced nothing but uniform kindness.

No. 2.

The Director of Public Instruction to the Hon. the Colonial Secretary.

Office of the Director of Public Instruction,
No. 309. Colombo, 19th October, 1882.

Sir,—I have the honor to acknowledge receipt of your letter No. 213 of 15th August, and its enclosures. The energetic and important part which Bishop Bonjean has taken for many years in the question of education; the symmetry and solidity of the Roman Catholic school system in Ceylon; the large number of Roman Catholics in the Colony; and the evidences which Bishop Bonjean has frequently given of his desire to co-operate with Government, with this Department, and, I gratefully add, with myself personally, entitle any expression of his views to my most attentive consideration. I have, therefore, given my best attention to the *Statement* by Bishop Bonjean, contained in your letter under reference, and if that *Statement* had suggested to me any amendments consistent with the varied and divergent interests which it is the difficult and, in truth, almost desperate duty of this Department to endeavour to reconcile, I should have been very willing to submit such amendments to the favourable consideration of Government. In fact, however, the objections raised by Bishop Bonjean, many of which are directed against the grant-in-aid system generally, and are not peculiarly appropriate to the Revised Code, have been already repeatedly raised and considered. I do not, therefore, deem it expedient to recommend any modification of the Code as already existing in the specific articles referred to, and I certainly do not see any reason to interfere with the general system of grants-in-aid dependent on results which has since its adoption worked with almost universally-admitted success, and which, looked at from the point of view which a Roman Catholic prelate may reasonably be expected to assume, seems

to have assured to the Catholics of Ceylon a fair share of the sums yearly allotted to public instruction out of the public funds.

Bishop Bonjean's statement includes—

A.—A vindication of the denominational system of education pursued in Roman Catholic grant-in-aid schools; and, based on this,

B.—A claim that all schools conducted in accordance with this system have a right to Government help, "independently of all rules of distance, attendance, &c.";

C.—Objections to certain specific regulations of the Code for Aided schools;

D.—General observations upon the management of grant-in-aid schools carried on by Protestant Missionary Managers;

E.—General observations on the way in which the duties of the officers of the Department of Public Instruction are carried out.

A.

With the general question of denominational schools as a factor in the grant-in-aid system of Ceylon, I have dealt so fully in my letter No. 195 of 20th July, 1882, that I will only take notice here of Bishop Bonjean's reference to Sir Hercules Robinson's intentions in order to show that the very clear exposition of Sir Hercules Robinson's views, contained in his address to the Legislative Council in introducing the resolutions which led to the establishment of the Department of Public Instruction, seems to be at variance with the tenor of Bishop Bonjean's "statement." That "Statement," indeed, amounts almost to a claim that the grant-in-aid system was intended as a measure for the exclusive benefit of Roman Catholic schools, and it distinctly urges that the schools of other religious societies should be subject to restrictions from which Roman Catholic schools should be free. The following extract from Sir Hercules Robinson's address (December 18th, 1867) shows that he desired to leave the question of religious teaching in schools "to the judgment and feeling of the Missionaries themselves," and he distinctly expressed his concurrence "with the Sub-Committee and the majority of the School Commission that, as a general rule, grants might be made to all private schools imparting a sound secular education."

"With reference to 'Grants-in-aid' the Sub-Committee recommend that such grants be given to all private schools applying for them which impart a sound secular education for a specified number of hours each day, irrespectively entirely of any religious instruction which may be given at other times. The majority of the School Commission fully concur in the proposal; but the President expresses his decided opinion that in no school, either wholly or in part supported by Government, should any pupil be denied admission to classes for secular instruction on the ground of his declining to accept religious instruction. There is, no doubt, much to be urged in support of the views taken by the President: for if any such rule be enforced, it must exclude many children from the benefits of all education. It is, I think, a question upon which missionaries and ministers of all religious denominations may well be more tolerant and self-reliant. They might trust more to their powers of persuasion in such a matter; and I believe that missionary influence will be enlarged in proportion to the toleration and liberality with which it is exercised. If children be allowed to receive religious teaching or not at the option of their parents—and missionaries and ministers rely in such a matter upon the great influence which they deservedly possess—I believe that in ninety-nine cases out of a hundred they would succeed in inducing the children to remain voluntarily for the religious teaching, and that the effect upon those who did so remain would be infinitely greater than if they were compelled to do so under the operation of a hard, unbending rule. The matter, however, is one which must be left to the judgment and feeling of the missionaries themselves; and I concur with the Sub-Committee and the majority of the School Commission that, as a general rule, grants might be made to all private schools imparting a sound secular education. It would however be necessary, I think, for the Government to reserve to itself the right to refuse such grants in cases in which the establishment or maintenance of Government schools may be rendered necessary, by the compulsory rule as regards religious instruction referred to. It could scarcely be expected that if the Government be compelled by reason of the sectarian character of any private school to maintain a public school in its immediate neighbourhood which is sufficient for the requirements of the district the Government should at the same time assist in supporting what would then be, as regards secular instruction, an unnecessary rival establishment."

I have only referred to this part of Bishop Bonjean's statement in order to remove the impression which might easily be conveyed,—that the general tenor of that statement, so far as the claim urged on behalf of Roman Catholic schools to the exclusion of the schools of other religious societies is concerned, has the sanction of Sir Hercules Robinson's authority.

B.

But logically connected with the position assumed by Bishop Bonjean is the claim that all Roman Catholic schools have "a right to Government help independently of all rules of distances, attendance, &c." And here I must point out that while this claim is put forth on behalf of Roman Catholic schools on the ground of their being *denominational* schools, Protestant Societies, who refuse to consent to a "conscience clause," equally claim for their schools the title of *denominational*, and many of them, if not all, would probably be unwilling to concede that a school with a conscience clause can properly be called a *denominational* school. But be this as it may, it is certain that if any such claims as are advanced on behalf of Roman Catholic schools were admitted, similar claims would be asserted and in accordance with our system in my belief justly by managers of all other grant-in-aid schools whatsoever. From the very outset a limit of attendance was fixed, and the necessity of such a limit requires no argument, and experience soon demonstrated the necessity of a limit of proximity between schools to be supported by Government. In practice, the records of this Department show that those managers who most strongly urge their right to have a school of their own supported by Government without reference to its proximity to existing schools are the loudest in their opposition to the establishment, with Government aid, of a school under other management which can by any possibility interfere with a school of their own.

O.

The claim for exemption from all limitations of number and space put forward by Bishop Bonjean leads to the first of the objections taken to particular clauses of the Revised Code. I may state, however, that the limitation of proximity between aided schools was imposed many years before the Revised Code was drafted, and, incidentally, I may note that in the same way many objections made against the Revised Code are really objections to principles or details adopted at periods long antecedent to the Code. What is now asked is that there should be incorporated in the Code a clause modifying Articles 11 and 12, with a view of exempting Roman Catholic schools from the rule which obstructs the establishment of rival schools supported by Government in close proximity to each other. If Bishop Bonjean's wishes were confined to publishing in a note attached to the Code the extract which he has quoted from my "Memorandum on the amendments contained in the Revised Code" (attached to the Code when laid before the Legislative Council in 1880), there would be no serious objection to such a course. It will be observed that the Colonial Secretary, in his letter of 17th February, 1875, part of which is included in this extract, after instancing a condition of things which would be "an exceptional circumstance," proceeds to say, "but every such case would have to be carefully enquired into before the sanction of Government to a grant could be given." It is evident that what Bishop Bonjean desires is a great deal more than this. Instead of the statement of a principle to be applied in exceptional cases, he wants in the first place to have a direct admission in the Code that "wherever there is a Christian religious community of sufficient number for a school," then "independently of all rules of distance, attendance, &c., and the like, it has a right to Government help." The claim as here stated, so far as attendance is concerned, seems to contain a contradiction in terms; but leaving that aside, it is obvious that if an inalienable, unconditional, and unrestricted right is allowed to be inherent in any religious section of the community, not by law established, it cannot reasonably be denied to others, and thus the limitation of proximity would be at once virtually annulled. But in the second place Bishop Bonjean wants more than this. He candidly states that he demands the incorporation in Articles 11 and 12 of such an admission as I have stated, because, in his opinion, "the *unreserved* adoption of the principle on which the Government Minute rests goes much farther than the question which led to its utterance," and because as soon as the *unreserved* adoption of the principle is admitted by incorporation in the Code, he "will urge its application to other portions of the Code." I have underlined above the word *unreserved*. There is a great gulf fixed between the carefully-reserved and restricted expression of the Colonial Secretary's letter and the unreserved adoption of the principle it contains, but it is exactly this gulf which it is desired to bridge over. I am of opinion that it is not desirable to modify Articles 11 and 12 as proposed by Bishop Bonjean.

With regard to the desire expressed that Articles 14 and 15 may be so remodelled as to enable all parties concerned to know and discuss in time before the Legislative Session any contemplated alteration in the Code, I have to point out that it is not the intention of the Code to provide that all amendments and alterations should be discussed in the Legislative Council before they are adopted. The Code expressly provides that amendments are to be made by the Governor and Executive Council, and published in the *Government Gazette*, and when so published they have the force of law, so far as the Code can be said to have any force of law at all, being merely a series of administrative regulations not dependent on any Legislative enactments. It is provided that the Code with all amended articles should be laid on the table of the Legislative Council, not because the sanction of the Council is required—for it is not—but merely as a convenient form of publication, and to ensure the due and regular codification of the amendments introduced. If any Member of the Council wishes to raise a discussion upon the amendments introduced into the Code by the Governor and Executive Council, the laying on the table of the Code gives him a convenient opportunity to do so, but it does not in any way affect the legality of the amendments sanctioned by the Governor and Executive Council. If the Code were not laid on the table of the Council at all, the force of the amendments would not be in any way disturbed, and the Members of the Council would have exactly the same right to introduce a motion with reference to the amendments published in the *Government Gazette* as they have now. It would be an inconvenient arrangement to make the sanction of the Legislative Council necessary for every amendment or modification of the Code, and it is not the intention of the Code to make such sanction necessary.

This being distinctly understood, I may add that it is my desire to ascertain always the wishes of managers before submitting any amendments of the Code for the approval of the Governor and Executive Council, and this I have hitherto endeavoured to do. All the amendments introduced in 1881 were introduced to meet the wishes of managers, except the modification of the conditions affecting capitation grants, and it would have been a mere farce to ask the managers officially to declare whether they wished to have these grants reduced by more than half. With regard to the amendments made during the present year, they were submitted by circular to all the managers early in the year before being submitted to the Governor and Executive Council, and were almost, if not quite, unanimously approved.

Article 20.—The question of average attendance has been so fully discussed that, unless the Government wishes me to reconsider it, I feel it unnecessary to add anything to what I have already said on the subject.

Article 26.—This question was considered while the Revised Code for 1880 was in Sub-Committee of Legislative Council. I dealt with it in my reply to Mr. Râma-Nâthan's Memorandum, Sessional Paper XLVI., 1880, p. 24. Bishop Bonjean states that the old arrangements worked satisfactorily; but if that had been the case I should certainly not have desired to alter them. I consider the expenditure under those arrangements to have been almost entirely thrown away.

Article 31.—On the subject of capitation grants I shall content myself with a reference to my Administration Report for 1881, clause 52, as the question has been very fully considered. Bishop Bonjean says that if economy is necessary the whole burthen should not be borne by grant-in-aid schools, but be divided between aided and Government schools. My Administration Report, clause 131, shows the very considerable reductions effected during the last two years in all classes of Government schools. With further reference to Article 31, Bishop Bonjean says: "Referring to schedules F. and G. we find that only *one* pass is allowed under the head of writing for handwriting, spelling, and grammar." This statement is not correct; schedule G. allows in Vernacular and Anglo-Vernacular a separate grant for grammar.

CHAPTER II.

SECTION I.—*Teachers.*

I have dealt with this question so fully in my Memorandum accompanying the original draft of the Revised Code, and elsewhere that, unless Government desire the question to be reconsidered, I do not think it necessary to review it again. Bishop Bonjean expresses a fear that the teachers trained by managers will be induced to leave them in order to enter the service of this Department. The standard of qualifications fixed for the Government Normal school is so much higher than that fixed for grant-in-aid training schools, and the qualifications fixed for certificates by examination for teachers in Government schools so much higher than that fixed for teachers in grant schools, that a teacher qualified to act as master of a grant school might fall very far short of the standard required to obtain promotion as a Government schoolmaster. But even if this were not the case, the argument seems to be a very dangerous one. Does Bishop Bonjean think it desirable in the interest of the people of Ceylon that the teachers of grant-in-aid schools should be kept at a very low standard of acquirements and efficiency in order to prevent them from being fit to serve in Government schools? If they are now really efficient teachers, they are just as much exposed to the temptations of Government service as they would be when certificated under the new arrangements.

With reference to school books, Bishop Bonjean "acknowledges the right of the Department to judge of the simple literary value of a book as a school text, and of its adaptation to the particular school or class in which it is used." The Department has no desire to interfere in the choice of school books, except so far as to require that they shall be of suitable length and difficulty. It was thought necessary to make this proviso expressly, because cases had occurred in which the Inspectors were asked to accept as reading books a few lines of *ola* manuscript. The words of the Code, if read with their context, are, as Bishop Bonjean admits, sufficiently clear, and the request to have copies of the books sent to the Department is necessary to prevent difficulties arising on the day of examination. If a very few pages of a very easy book, or a few lines of ola were offered as the subject of examination, and the Inspector refused to accept them as of suitable length and difficulty, the grant would be lost; and it is to prevent this, and entirely in the interest of managers, that the request is made. Bishop Bonjean says: "Objecting to a book on the score of its containing too many religious subjects, so long as the style is of the proper unexceptionable quality, is what seems to me to go beyond the bounds, but what has been done on more than one occasion in our schools." I can state most positively that I have never refused a grant for reading under such circumstances, and I believe that I should be safe in declaring not less positively that no grant has ever been refused for reading because the book offered contained too many religious subjects, although the style was of the proper unexceptionable quality. I shall indeed be very much surprised if Bishop Bonjean can refer to a single instance in which the Department has refused to pay a grant for reading to any Roman Catholic school whatsoever under his management or in his Vicariate on the ground that the book offered was thought objectionable, either because it contained too many religious subjects, or for any other reason whatsoever, unless it were on the ground of insufficient length or difficulty.

Bishop Bonjean has alluded to a memorandum in which certain denominational ministers demanded that "no book to which a manager shall object with respect to its moral or religious tendencies should be used in examination." This objection referred particularly to the use of Buddhist literature in Sinhalese schools, but any general rule on the subject would necessarily have had wider consequences. When a number of the managers called upon me on the subject, I explained to them the very grave objections which there would be to any regulation which should exclude, or even appear to exclude, from schools supported by Government in Ceylon the whole classical literature of Ceylon and India. Some of the managers at once admitted the force of my objection, as well as the consequences which might logically be expected to follow, and I therefore proposed the alternative standards now adopted. With this proposal several of the managers have expressed their complete satisfaction, and in the numerous replies to my circular sent to managers on the subject not one objection has hitherto been raised. If the Department in its examinations is to be confined to literature equally acceptable to Roman Catholics, Protestant Missionaries, Buddhists and Hindus, the range is likely to be somewhat narrow. If Roman Catholic children or young men were not allowed to take part in any examination not confined to books expressly allowed by the Bishop, they would be excluded from all University and public competitive examinations in England, for no such examinations are limited by any condition of the kind here demanded.

The examinations now under discussion are limited, generally, to the reading of eight or ten lines out of a book or newspaper, and the Inspector would be guilty of a gross dereliction from duty if he selected a passage which could in that brief compass damage the faith or morals of the boys to be examined. I consider the objection made to this part of the Code very unreasonable.

D.

I have now dealt sufficiently with the objections contained in the "*Statement*" to specific regulations of the Code. Bishop Bonjean's observations upon the management of grant-in-aid schools under Protestant Missionaries, it is, I think, best for me to pass over in silence. If Bishop Bonjean carries out his intention of publishing his *Statement* the Protestant Missionaries will no doubt be able, should they think it necessary, to vindicate their motives and operations.

E.

In answer to Bishop Bonjean's observations on the way in which the duties of the officers of the Department are carried out, I annex copy of a letter from Mr. Blair, which proves how anxious he has been to carry out, with uniform impartiality, the difficult and delicate duties assigned to him, and I have no hesitation in saying that, as a general rule, the work of the Inspectors in Ceylon is fulfilled with a conscientious desire to do equal justice to Government and to the managers of all denominations impartially. This is not the place for me to enter into a general vindication of the impartiality of this Department, but in proof of our desire to secure this impartiality, I may instance the fact, alluded to by Mr. Blair, that in the first examination of Training schools, in which the same papers were set to candidates from different Missions, the papers of the candidates in the Northern Province were looked over and marked by three separate examiners, and an average of the marks assigned by each examiner was awarded to the candidates. The same system will be carried out in other competitive examinations of equal importance. I may further instance the introduction of the Cambridge Local Examination as an illustration of my desire to secure, wherever practicable, a perfectly impartial criterion of the school work done in Ceylon, and in concluding this subject, I submit copy of a circular and enclosures recently forwarded to Inspectors with a view to secure, as far as possible, uniformity and impartiality in all examinations.

It will not be out of place for me, before closing these observations, to give a few figures with reference to that passage of Bishop Bonjean's statement in which he says: "I had for years urged the claims of the Catholics of Ceylon, as tax-payers, to their proper share in the sums yearly allotted to public education from the public funds for the maintenance of purely Catholic schools, that is, of schools which, whilst they maintained the proper standard of secular education required by Government, were to be entirely Catholic in their management, their teaching staff, their text-books, their discipline, and their spirit."

Under the grant-in-aid system the Roman Catholic schools are in no way fettered in any of these particulars, and the share allotted to them out of the expenditure on education from public funds is not, I think, inadequate. The expenditure of the Department, Government and grant-in-aid, on middle and primary schools in 1881 amounted to Rs. 340,283. Deducting from the expenditure of Government schools the sums recouped as fees, I find that the expenditure on this head, which includes all the schools receiving grants-in-aid on the system of result-payments and the Government schools of corresponding rank, the nett expenditure on middle and primary schools was approximately Rs. 330,000. Of this sum, the Roman Catholic schools obtained very nearly Rs. 60,000, or about 18 per cent. It is not possible to state with accuracy the number of Roman Catholics in Ceylon, but I will assume them to amount to 220,000, or 8 per cent. of the entire population. The cost of direction and inspection and other charges which make up the total expenditure of the Department cannot be easily divided, but as the Roman Catholic schools amount to about one-sixth of the schools connected with the Department, I will add Rs. 10,000 as their share of cost of direction and inspection. This gives an expenditure of Rs. 70,000 on Roman Catholic denominational schools, or nearly 15·5 per cent. of the whole nett expenditure of the Department. Besides this, the Roman Catholic community gets its fair share of the expenditure on other general heads, such as Superior Instruction, Reading Rooms and Libraries, Books, and Miscellaneous charges. Thus, we have approximately—

Percentage of Roman Catholic population to population of Ceylon ...	8
Percentage of expenditure in Roman Catholic Denominational schools to total nett expenditure on Middle and Primary schools ...	18
Percentage of expenditure on Roman Catholic schools (including direction and inspection) to total nett expenditure of Department ...	15·5

I am, &c.,
CHAS. BRUCE,
Director.

Enclosure No. 1 in No. 2.

Mr. Inspector BLAIR to the DIRECTOR of Public Instruction.

No. 47. Colombo, 3rd September, 1882.

SIR,—I AM much obliged to you for referring to me the Right Rev. Bishop Bonjean's "objections" to the Revised Code for my observations.

2. I do not, however, propose to reply to his tirade of invective against the Government or the Protestant Missionaries, as the policy of the Department on all religious questions is one of absolute neutrality, or to enter into detail in reply to his vague charges (unsupported by facts) against the Revised Code, but to confine my remarks to his Lordship's accusations against the *Inspectors of Schools.*

3. But I may mention in passing, that, during my residence in Jaffna, five applications for new schools were referred to me for report from the Catholic Mission, viz., Navalai, Kankésanturai, Point Pedro, and Jaffna (two); that in four cases the schools were accepted on the ground that they were intended for Catholic children, although there were Protestant or private schools in the immediate neighbourhood; and that one only was declined because there were Catholic schools available.

4. Bishop Bonjean's charges against the inspecting staff are very serious. He says: "Inspectors seem to follow no precise rule in the giving or the refusing of passes. I have seen both done at random, by caprice, under the influence of good or bad humour," &c.

To this I reply:—Bishop Bonjean makes the charge on hearsay testimony. During the whole time I was in Jaffna I never saw him present at a single examination of my own, and I never heard of his presence at an examination conducted by my assistants; and that passes are awarded at "random" or by "caprice" is, I submit, utterly and absolutely incorrect. Speaking of myself, I may say that I have had 15 years' experience as an Inspector of Schools, and during this time I have never commenced an examination without carefully preparing the questions beforehand, and although the general percentage of passes awarded by me is far below the average, so far as I know I have never before been accused of either unfairness or caprice.

5. Immediately after assuming the supervision of the Northern Province, I had an interview with the Rev. Father O'Flanagan, the Manager of the Catholic schools, when I understood him to say that the tests adopted by the Assistant Inspectors were "ridiculously easy," and a day or two after I laid down a few plain and definite rules for their guidance.

6. For example, in the subject arithmetic, in all classes above the Second Standard I instructed them to give five questions carefully selected by myself, and to award a pass to every scholar who worked three or more correctly; in dictation, to give a passage of five or six lines, and to pass all who made fewer than three mistakes; in geography and history, to ask each boy not less than five questions and to insist on three correct answers. My instructions were, so far as I know or have at present reason to believe, faithfully carried out, and these rules are now adopted by every Inspector and Assistant Inspector in the Island.

7. The standard briefly sketched above may be considered too difficult or too lenient, but I think it conclusively disproves Bishop Bonjean's charge that passes are awarded *at random* or *by caprice*.

8. I may also mention that in the case of important examinations for Queen's scholarships, &c., the candidates' papers are looked over by three Inspectors, and a general average is taken.

9. Bishop Bonjean's statement that "the award of the Inspector is final" is not correct. Cases have occurred when the decisions of some of them have been questioned, though I am happy to say that such cases are very rare and exceptional, amounting to less than one in 500, but when appeals have been made they have been always carefully investigated and received the most careful consideration.

10 "Some inspectors," says Bishop Bonjean, "put hard questions with a view to confuse, have refused passes that have been fairly earned," &c., &c, just as though plucking were the grand object for which they were sent, and he goes on to say "It is high time that something were done to restrain their impulses or to correct their hasty awards."

11. This, I venture to assert, is not correct, as is proved by the fact that the average percentage of passes obtained in the schools in the Northern Province is quite as high as the average percentage obtained in schools in England, and to suppose that the former, conducted as they are mostly by untrained teachers, are as efficient in discipline and instruction as the latter is absurd.

12. It is very easy to make sweeping charges of this kind against a whole body of officers, but I challenge Bishop Bonjean to mention a single case where an inspector "put hard questions with a view to confuse the scholars" during the whole of the time I had the supervision of the Northern Province, and I have recently prepared upwards of 200 questions in the subject in which the largest number of failures occur (arithmetic), questions which are used throughout the Island, and I challenge Bishop Bonjean to point out a single one that is not in accordance with the letter and spirit of the requirements of the Revised Code.

I do not, of course, claim for my colleagues or myself infallibility, but when we do err it is almost invariably on the side of leniency, and speaking for myself, I may say I have never to my knowledge refused a pass where, in my opinion, it has been fairly earned, and how Bishop Bonjean reconciles the charges brought against us with the concluding paragraph of his memorandum in which "he is happy to say that he has, as a rule, received nothing but uniform kindness" from us, I am at a loss to imagine.

I have, &c.,

W. BLAIR,

Inspector.

Enclosure No. 2 in No. 2.

CIRCULAR to Inspectors of Schools.

IT has been my desire to secure, as far as possible, uniformity of method and an equal standard of requirement in the examinations held by this Department in both Government and grant-in-aid schools. I am anxious, therefore, to encourage inspectors and sub-inspectors to confer freely with each other on the details of examination, and to endeavour to conduct their examinations in such a way as to make it, so far as the pecuniary results are concerned, a matter of indifference whether the examination of a grant-in-aid school is held by one Inspector or Assistant Inspector or another.

In order to secure more easily and completely the end in view, I forward to you herewith copies of a letter addressed by Mr. Blair to his Assistants in the Western and Southern Provinces, and I have to request that you will be good enough to see that the examinations held by yourself and your Assistants are conducted as closely as possible in accordance with the method adopted by Mr. Blair.

When you have held a sufficient number of examinations to enable you to judge fairly of the advantages of Mr. Blair's plan, I shall be glad to consider any suggestions you may wish to make in order that such additions may be hereafter added to the instructions to inspectors as shall secure the greatest possible uniformity and fairness in all examinations held by this Department.

Office of the Director of Public Instruction,
Colombo, 17th October, 1882.

CHAS. BRUCE,
Director.

Sub-Enclosure in Enclosure No. 2 in No. 2.

CIRCULAR to Assistant Inspectors of Schools.

Department of Public Instruction,
Colombo, 13th October, 1882.

SIR,—IN order to secure uniformity in the examination of schools, and to prevent, as far as possible, any cause of complaint from school managers, and, at the same time, to carefully protect the interests of the Government, I have the honor to invite your careful attention to the following instructions :—

2. The Revised Code requires that "notice of the day of the inspector's *annual* visit shall be given beforehand to the managers." (*R. C., Sec.* 9.) This notice should always be *in writing*, on the form supplied by the Department, and should be sent *at least* ten days before the time appointed. I shall therefore be much obliged, if, before the 15th of each month, you will send me a list of your proposed engagements for the following month, to be returned to you approved, or otherwise, before the 20th. I have also to request that you will send a *written* notice of the annual examination to the teachers of all Government schools. To this rule there should be no exception.

3. In fixing the hour for your annual examinations, I would point out that an early attendance at the school is absolutely indispensable, not only on account of the greater length of time available for work, but in the interests of children, who are better able to sustain exertion in the early part of the day.

4. Before commencing the examination you will carefully look over the "Report Slips" and cancel the names of any scholars who are ineligible, *i.e.*, those who have been less than 9 months, less than 100 days, or are over age, &c., &c. You will also make a careful inspection of the Registers of Attendance and Admission, making notes of such facts as you may think it desirable to communicate to the Department.

5. In conducting the examination of the scholars, I would especially call your attention to the fact that all hurry or undue haste is incompatible with the efficient discharge of your duties. I would also point out that anything like *harshness*, impatience, or want of courtesy is very much to be deprecated, while to laugh at, sneer at, or ridicule a scholar who gives an absurd answer (and you will have many such answers) is unpardonable.

Uniformity of Standard.

6. It is not necessary that I should enter into minute details as to the rules to be observed in awarding passes or failures, for, after laying down the most explicit instructions, much will necessarily remain that can only be decided by a correct and an intelligent judgment.

I may, however, mention the following principles which should guide all your decisions.

Reading.

7. The Code recommends that at least two sets of reading books shall be provided. When this is not done you will make a note of the fact on the Report Slips, to be transmitted to the Director. All the ordinary standard reading books appear to me to satisfy the requirements of the Code and to provide a sufficient amount of literature for exercise in the art of reading.

8. In Standards I., II., and III., intelligent reading, I think, suffices to justify a pass without much examination into the subject-matter or meaning of the passage read ; but it should be considered a grave fault if the children have been allowed to read the lesson so often as to be able to repeat it from memory, or with occasional glances at the book (you will be especially careful to guard against this evil in the examination of Anglo-Vernacular schools), if it is not audible at a reasonable distance, and, in the upper standards, if it is not intelligible to you without looking at the book.

9. In the fourth and higher standards the scholars should have a fair knowledge of the meaning of the subject-matter read. I do not mean by this that they should be able to give synonyms for the long and difficult words, but that they should be able to explain short sentences and simple phrases, and to express the meaning in their own language.

10. When you are required to examine an English school you will be careful to note that in standards above the third a knowledge of English grammar is required, and although excellent reading should be allowed to atone for some imperfections in grammar, and *vice versa*, no scholar should be allowed to pass if either exercise is *bad*, or both moderate or imperfect.

Writing.

11. In Standard I. the writing should be done on slate or blackboard from copy, and regarded solely as a test of handwriting.

12. The exercise in Standard II. should consist of (*a*) writing two or three simple sentences containing none but the easiest and most familiar words, from dictation, with less than 10 per cent. of mistakes; (*b*) an exercise on paper to test the child's power of forming and combining letters in large text.

13. In the third and upper standards you will select (*a*) a paragraph for dictation containing six or eight lines of average difficulty, free from puzzling words, allowing the teacher to read the passage to the children before it is dictated by you, or you may, if you think it is desirable, ask the teacher to give out the whole of the dictation. But the common practice for a teacher to walk behind the boys and look at their slates while the exercise is going on is open to serious objection, and must not be permitted. More than three mistakes for every fifty words in this exercise should generally involve failure, but if the handwriting be really *good*, a pass may be awarded if the number of errors does not exceed four; (*b*) in addition to the exercise from dictation you will test the children's ability to write on paper, and no child should be allowed to pass if he cannot write *fairly well*, although he may have had no mistakes in spelling. It is impossible to over-estimate the importance of correct spelling, but it cannot altogether atone for *bad* writing, and the instructions to Her Majesty's Inspectors in England on this subject are:—"In Standard III. and those above it, correct spelling should not in any case obtain a pass if the writing is below *fair*."

14. In Standard VI. the passage selected to be written from memory should be an anecdote or simple story, occupying from 15 to 20 lines of ordinary length, not selected from any reading book used in the school, and containing some sufficiently obvious *point* or simple moral. This passage had, perhaps, better be read aloud by the teacher. In awarding a pass or otherwise you will require that the writing shall be fairly good, but you will remember that the scholar has already probably received *five* grants for handwriting, and hence neither accuracy in spelling nor excellence in writing should secure a pass unless the exercise is an *intelligent reproduction of the story.*

15. Standards VII. and VIII. The exercise should be neatly, carefully, and correctly written, due regard should be paid to grammatical accuracy, and the scholar should be expected to show some knowledge of the subject he is writing about or describing. In selecting subjects you will be careful to give only those that are familiar and of common experience, such as come under their immediate observation every day.

Arithmetic.

16. The award of a pass or a failure in this subject presents very little difficulty. In Standard II. it has been customary to set three sums and to require two for a pass; in standards above the second to set five sums and require three for a pass. You will continue to carry out this system in all schools until the end of the year, but after the first of January next it has been decided in *Girls' schools* to give four sums and to accept two correct answers for a pass. In Boys' schools it will not be necessary to alter the existing arrangements.

17. In this connection I would invite your careful attention to the subject of copying—a practice which I am afraid is carried on to a great extent. You will therefore exercise the greatest vigilance in preventing it. I am having a number of cards printed in the vernacular, and before the end of the year hope to supply you with two or three hundred. This will enable you to set every scholar to work without loss of time, and as no two scholars will have the same questions, copying will be impossible.

18. As you are responsible for the efficiency of Government schools, I shall be glad if you will encourage the teachers to spend a short time every day on *mental arithmetic*—an exercise which will promote dexterity and accuracy when the scholars are required to work longer problems in writing. I do not mean by this that these exercises should be confined to rules for computing the cost of "dozens" or "scores" supposed to be specially suited for mental calculation, but to all the ordinary processes of arithmetic.

Geography and History.

19. In the IVth, Vth, and VIth standards you should ask each scholar 10 simple questions requiring a short answer, and award a pass to all who answer six or more correctly. When the class is large you will find it a great saving of time to ask simple questions, one at a time, and request the scholars to write the answers on slate. But here, as in arithmetic, the greatest care is necessary to prevent copying.

20. In standards above the VIth the work should generally be done on paper and be examined and marked at your convenience out of school. It is difficult to lay down mechanical rules for awarding a pass or a failure. You will frequently be presented with excellent or bad papers, which can be marked in a minute or two, but those which range between fair and imperfect always require careful consideration.

21. I have also the honor to invite your attention to the examination of needlework. I believe that in the great majority of cases the work shown on the day of the examination is *bonâ fide*; but after the 1st January next you will require the work done in your presence.

22. In framing the foregoing instructions I have freely consulted the instructions to Her Majesty's Inspectors in England, (1st) with the object of securing uniformity of standard of examination, and, (2nd) with the view of promoting the efficiency of the schools and the usefulness of this Department. The duties imposed upon you are delicate and onerous, but the industry and fidelity with which you have discharged them in the past lead me to hope that the inspecting staff will continue to merit the Director's confidence.

I have, &c.,

W. BLAIR,

Inspector.

No. 3.

The Hon. the COLONIAL SECRETARY to the DIRECTOR of PUBLIC INSTRUCTION.

No. 308. Colombo, 4th November, 1882.

SIR,—I AM directed to acknowledge the receipt of your letter No. 309 of the 19th ultimo. As the letter to which it replies has been published by Bishop Bonjean, I am to state that the Governor will be glad to learn whether you wish your letter under acknowledgment to be printed.

I have, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

No. 4.

The DIRECTOR OF PUBLIC INSTRUCTION to the Hon. the COLONIAL SECRETARY.

No. 330. Office of the Director of Public Instruction,
Colombo, 10th November, 1882.

SIR,—IN reply to your letter No. 308 of the 4th instant, I have the honor to inform you, that if the Governor is of opinion that in view of the publication of Bishop Bonjean's letter, it may be of advantage in removing misapprehensions or misconceptions to print my letter of the 19th ultimo, I shall be glad to have it printed.

Bishop Bonjean's letter as now published differs, however, materially from the *statement* which formed the subject of my previous letter, and it will be necessary to add to what I have already said a few remarks on two points to which Bishop Bonjean's extended observations have given greater prominence, and which are of general importance.

Bishop Bonjean has now added a number of statistics designed to prove that the share of the expenditure on education allotted to Roman Catholic grant-in-aid schools is unjustly small as compared with the amounts appropriated to Government schools and grant-in-aid schools under Protestant managers, and he sums up his claims in these words :—

"But this, I maintain, that whether in the matter of Normal School grants, or in that of grants to children's schools, no rule can with justice be set up, except one under which the number of Catholic children requiring education shall regulate the amount of the Catholic grant. Catholic parents, it ought never to be forgotten, are tax-payers, and they have a right to receive for the efficient education of their children, *in Catholic Schools*, a share in the portion of those taxes which is applied to education, such as their numbers justify."

I presume that Bishop Bonjean will allow that the non-Catholic community have equal claims with Catholics to a share in the expenditure from public funds on education, and I have already shown in my previous letter that if, in apportioning the education vote the scale of adjustment is to be fixed on the basis of a religious census, the share actually paid to Roman Catholic managers is about twice the amount to which they are entitled.

Dividing the community generally into Roman Catholics, Protestants and non-Christians, and assuming the interests of the non-Christians to be represented generally in Government and non-Christian or unsectarian aided schools, the distribution of the vote on the basis of a religious census should be approximately as follows :—

	Population represented.	Share of Rs. 455,000, (nett expenditure, 1881).
		Rs.
Roman Catholics* ...	220,000 ...	36,400
Protestants ...	60,000 ...	9,900
Government schools and non-Christian or unsectarian aided schools ..	2,470,000 ...	408,700

The actual distribution being approximately as follows :—

	Rs.
Roman Catholic schools ...	70,000
Protestant do. ...	145,000
Government schools and non-Christian or unsectarian schools ...	240,000

In this calculation I have charged a proportionate share of the cost of direction and inspection to Roman Catholic and Protestant schools, but none of the miscellaneous expenditure of the Department, nor have I taken into account the expenditure on account of Roman Catholic and Protestant children attending Government or unsectarian schools.

For an explanation and justification of the present distribution of the vote, I must refer to the general vindication of the grant-in-aid system existing in Ceylon, in my letter No. 195 of 20th July.

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* I have, perhaps, over-estimated the Catholic community. In *Ferguson's Directory* the numbers are estimated as : *Roman Catholics*, 204,000. The difference would not appreciably alter the distribution of the expenditure.

On page 24 of his published *Remarks*, Bishop Bonjean says:—

"*Economy.*—Now, the cry is for economy. But economy does not mean depriving one of his dues, and it must be remembered that the present depression of the colony affects the resources of individuals, and among these of managers of schools, just as much as it does the public funds; that there is a compact between the managers and Government that, having fulfilled the conditions accepted by them, they have a strict right to the aid promised by Government; that if the sums allotted to education must be curtailed, justice requires that the retrenchment should not be borne by aided—still less by aided *denominational*—schools alone, but by Government schools in some fair proportion."

In order to show how fully the attention of this Department has been devoted to the necessity for economy in the management of Government schools, I annex four tables (A., B., C., D.) showing the reductions effected in the cost per head of each scholar educated in the different classes of Government schools since I took charge of the Department at the beginning of 1879. The collective amount of these reductions, calculated by multiplying the saving on each scholar by the total number of scholars in each class of schools at the end of each year, is as follows:—

		Rs.	cts.
1878—1879	...	32,640	34
1879—1880	...	16,911	7
1880—1881	...	28,312	6
		Rs. 77,863	47

I will only add that Bishop Bonjean has omitted throughout his calculations to credit Government schools with the amount recouped by fees, and he has included under the head of "Government schools" several considerable sums of which part are grants-in-aid, such as grants to Roman Catholic and other Industrial schools; and part, such as expenditure on scholarships, being open equally to Government and grant-in-aid schools, cannot fairly be assigned exclusively to Government schools. I need not specify these sums as they do not in any way affect the general principles with which I have dealt.

I am, &c.,
CHAS. BRUCE,
Director.

A.

COMPARATIVE STATEMENT of the cost to Government per head of educating each pupil in the different classes of Schools between 1878 and 1879.

	Cost to Government per head in 1878.		Cost to Government per head in 1879.		Reduction in cost per head.	
Superior Instruction.	Rs.	cts.	Rs.	cts.	Rs.	cts.
Royal College	105	33	101	47	3	86
Normal School	341	0	345	21	(Increase) 4	21
Galle Central School	56	6	54	61	1	45
Middle and Primary.						
Boys' English Schools	26	59	22	53	4	6
„ Anglo-Vernacular	14	77	11	20	3	57
„ Vernacular	6	43	5	17	1	26
Girls' English Schools	47	13	42	79	4	34
„ Anglo-Vernacular	27	54	22	44	5	10
„ Vernacular	5	58	4	70	0	88

STATEMENT showing collective amount saved by the reductions in the cost of each pupil in Government Schools in 1879 as compared with cost in 1878.

	Scholars.	Reduction of cost of each scholar.		Total Reduction.	
Superior Instruction.		Rs.	cts.	Rs.	cts.
Royal College	175	3	86	675	50
Normal School	50	(Increase) 4	21	—	
Galle Central School	92	1	45	133	40
Middle and Primary.					
Boys' English Schools	1,151	4	6	4,673	6
„ Anglo-Vernacular	1,618	3	57	5,776	26
„ Vernacular	13,497	1	26	17,006	22
Girls' English Schools	446	4	34	1,935	64
„ Anglo-Vernacular	126	5	10	642	60
„ Vernacular	2,282	0	88	2,008	16
				Rs. 32,850	84
		Deduct Increase, Normal School		„ 210	50
				Rs. 32,640	34

B.

COMPARATIVE STATEMENT of the cost to Government per head of educating each pupil in the different classes of Schools between 1879 and 1880.

	Cost to Government per head in 1879.		Cost to Government per head in 1880.		Reduction in cost per head.	
	Rs.	cts.	Rs.	cts.	Rs.	cts.
Superior Instruction.						
Royal College	101	47	90	47	11	0
Normal School	345	21	285	41	59	80
Galle Central School	54	61	44	16	10	45
Middle and Primary.						
Boys' English Schools	22	53	21	40	1	13
,, Anglo-Vernacular	11	20	11	53	(Increase) 0	33
,, Vernacular	5	17	4	83	0	34
Girls' English Schools	42	79	36	39	6	40
,, Anglo-Vernacular	22	44	20	25	2	19
,, Vernacular	4	70	4	36	0	34

STATEMENT showing collective amount saved by the reductions in the cost of each pupil in Government Schools in 1880 as compared with cost in 1879.

	Scholars.	Reduction of cost of each scholar.		Total Reduction.	
		Rs.	cts.	Rs.	cts.
Superior Instruction.					
Royal College	191	11	0	2,101	0
Normal School	61	59	80	3,647	80
Galle Central School	81	10	45	846	45
Middle and Primary.					
Boys' English Schools	1,165	1	13	1,316	45
,, Anglo-Vernacular	1,735	(Increase) 0	33	—	
,, Vernacular	15,093	0	34	5,131	62
Girls' English Schools	506	6	40	3,238	40
,, Anglo-Vernacular	136	2	19	297	84
,, Vernacular	2,659	0	34	904	6
			Rs.	17,483	62
Deduct Increase, Boys' Anglo-Vernacular Schools			...	572	55
			Rs.	16,911	7

C.

COMPARATIVE STATEMENT of the cost to Government per head of educating each pupil in the different classes of Schools between 1880 and 1881.

	Cost to Government per head in 1880.		Cost to Government per head in 1881.		Reduction in cost per head.	
	Rs.	cts.	Rs.	cts.	Rs.	cts.
Superior Instruction.						
Royal College	90	47	72	62	17	85
Normal School	285	41	208	46	76	95
Galle Central School	44	16	52	44	(Increase) 8	28
Middle and Primary.						
Boys' English Schools	21	40	18	31	3	9
,, Anglo-Vernacular	11	53	9	50	2	3
,, Vernacular	4	83	4	70	0	13
Girls' English Schools	36	39	26	1	10	38
,, Anglo-Vernacular	20	25	4	18	16	7
,, Vernacular	4	36	4	37	(Increase) 0	1

STATEMENT showing collective amount saved by the reductions in the cost of each pupil in Government Schools in 1881 as compared with cost in 1880.

	Scholars.	Reduction of cost of each scholar.		Total Reduction.	
		Rs.	cts.	Rs.	cts.
Superior Instruction.					
Royal College	222	17	85	3,962	70
Normal School	75	76	95	5,771	25
Galle Central School	83	(Increase) 8	28	—	
Middle and Primary.					
Boys' English Schools	1,326	3	9	4,097	34
,, Anglo-Vernacular	1,922	2	3	3,901	66
,, Vernacular	15,754	0	13	2,048	2
Girls' English Schools	650	10	38	6,747	0
,, Anglo-Vernacular	156	16	7	2,506	92
,, Vernacular	3,559	(Increase) 0	1	—	
				Rs. 29,034	89
Deduct Increase, Galle Central School			...	Rs. 687 24	
Do. Girls' Vernacular Schools			...	,, 35 59	
				722	83
				Rs. 28,312	6

D.

STATEMENT showing collective amount saved by the reductions in the cost of each pupil in Government Schools in 1881, as compared with cost in 1878.

	Scholars.			Reduction of cost of each scholar.			Total Reduction.			Total reduction in three years.
	1879.	1880.	1881.	1879.	1880.	1881.	1879.	1880.	1881.	
Superior Instruction.				Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.
Royal College	175	191	222	3 86	11 0	17 85	675 50	2101 0	3962 70	6739 20
Normal School	50	61	75	4 21*	59 80	76 95	—	3647 80	5771 25	9419 5
Galle Central School ...	92	81	83	1 45	10 45	8 28*	133 40	846 45	—	979 85
Middle and Primary.										
Boys' English Schools ...	1151	1165	1326	4 6	1 13	3 9	4673 6	1316 45	4097 34	10086 85
„ Anglo-Vernacular ...	1618	1735	1922	3 57	0 33*	2 3	5776 26	—	3901 66	9677 92
„ Vernacular ...	13497	15093	15754	1 26	0 34	0 13	17006 22	5131 62	2048 2	24185 86
Girls' English Schools ...	446	506	650	4 34	6 40	10 38	1935 64	3238 40	6747 0	11921 4
„ Anglo-Vernacular ...	126	136	156	5 10	2 19	16 7	642 60	297 84	2506 92	3447 36
„ Vernacular ...	2282	2659	3559	0 88	0 34	0 1*	2008 16	904 6	—	2912 22
										79369 35
	1879—Deduct increase, Normal School ...								... 210 50	
	1880— Do. Boys' Anglo-Vernacular Schools								... 572 55	
	1881 { Do. Galle Central School								... 687 24	
	1881 { Do. Girls' Vernacular Schools								... 35 59	
										1505 88
									Rs. ...	77863 47

* Increase.

XXXI.—1882.

HARBOUR RECEIPTS.

RETURN to an Order of the LEGISLATIVE COUNCIL of CEYLON, dated the 8th November, 1882.

"That a return showing the estimated receipts, based on the shipping trade and imports of 1881, to be derived from all dues levied at the port of Colombo under the rules to come into force on the 1st of January, 1883, distinguishing dues levied on tonnage from dues levied on imported goods, with a statement comparing approximately the estimated receipts under each head in 1883 with the actual receipts of 1881, be furnished."

Ordered by the Legislative Council to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1882.

HARBOUR RECEIPTS.

No. 1.

From the Hon. the COLONIAL SECRETARY to the Hon. the PRINCIPAL COLLECTOR of Customs.

No. 212. Colombo, 7th November, 1882.

SIR,—I AM directed to transmit for your information the enclosed copy of a question by an Unofficial Member of the Legislative Council, together with a copy of the Lieutenant-Governor's reply thereto.

I am at the same time to transmit to you the enclosed copy of a motion by the Government Agent of the Central Province (notice of which has been given by him), and I am to request you to make the necessary calculation, and furnish me with the return therein asked for, if possible, before the meeting of the Legislative Council to-morrow afternoon.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

Copy of Question referred to.

"To ask if, in accordance with the recommendations of the Chamber of Commerce, Government will consent to modify the Schedule of Port, Tonnage, and Harbour and Warehouse Dues to be levied from 1st January, 1883, in the following manner:—

(1) *Transhipment Goods* to be free; if landed, no rent to be charged till after five days, when rent will be charged on the existing scale.
(2) *Re Exports* paying dues inwards, to be free from dues outwards.
(3) *Five days* to be understood to mean, 'or part thereof, with a further similar charge for every five days,' after words or 'part thereof.'
(4) *Additional Charges* for port dues to be calculated on a vessel's stay in port exceeding 96 hours and 288 hours only.
(5) *Coal* to be exempt from dues.
(6) *Mail Steamers* to be allowed to compound for port dues."

Lieutenant-Governor's Reply referred to.

1. Transhipment goods will be free of tonnage if landed, and no rent will, as now, be charged till after three clear days (*i.e.*, not including day of import and day of export).

2. Re-exports paying due inwards to be free outwards. Government is disposed to agree to this recommendation, and will submit it to the Secretary of State. It is, however, too important a variation from the scale submitted to and sanctioned by the Secretary of State for the local Government to adopt it without previous sanction. Probably his decision will be received before 1st January.

3. Three days is understood to mean five days or part thereof. The point will be made clear in the Proclamation which is now about to issue.

4. The Government are prepared to agree to simplify and restrict the additional charges for port dues in the manner asked for, and the modification is being made in the Proclamation.

5. Coal will be exempt from dues outwards, not being considered as cargo when reshipped for consumption, but Government is not prepared to make any alteration in the rate of 25 cents per ton inwards which was adopted upon the recommendation of the Chamber of Commerce. It is to be remarked that the imports of coal during the past six months do not prove anything as to future imports; the imports of the past six months included the stock of coal which the great Mail Companies will have to keep on hand here in future as well as their current consumption. In future, the imports will consist of only their current consumption. We have nothing as yet to show what that will amount to.

6. Government is not prepared to compound with any steamers or Companies for port dues, and no suggestion that it should do so has ever come before it.

Motion referred to.

The Hon. the GOVERNMENT AGENT, Central Province.

"To move for a return showing the estimated receipts, based on the shipping trade and imports of 1881, to be derived from all dues levied at the port of Colombo under the rules to come into force on the 1st of January, 1883, distinguishing dues levied on tonnage from dues levied on imported goods, with a statement comparing approximately the estimated receipts under each head in 1883 with the actual receipts of 1881."

No. 2.

From the Hon. the PRINCIPAL COLLECTOR OF CUSTOMS to the Hon: the COLONIAL SECRETARY.

No. 78.

Customs, Colombo,
13th November, 1882.

SIR,—IN reply to your letter No. 212 of 7th instant, calling for the necessary estimates and calculations of the proposed harbour dues, &c., to be laid before the Legislative Council for the information of the Government Agent of the Central Province, I have the honor to enclose an abstract (A) taken from the detailed calculations prepared from the Returns of Imports, Exports, and Tonnage, as published in the Blue Book of 1881, showing the amount that would have been collected under the new harbour dues, &c., had they been in force during that period.

2. These calculations have been very carefully compiled, and may, I believe, be fully relied upon to form a basis for the estimate called for the year 1883. An abstract of this estimate is also enclosed (B).

3. In these estimates and calculations I have included the amount that would be collected upon imports exported, as the question whether they should be charged or be exempted is still under consideration.

4. Transhipment dues, and goods in course of transit, although landed, appear by the Proclamation to have been relinquished.

5. From the great depression in trade, I cannot estimate any increase over that of 1881. The estimate of the coffee crop of 1882 and 1883 is, I believe, only 200,000 cwts., being less by 235,481 cwts. than that of 1881. This deficiency will, I apprehend, affect our grain importations, and with so great an anticipated loss on these staple articles I cannot venture to increase this estimate over 1881, excepting in the case of coals and port dues. Coals have been imported largely during the current year, and at the present date exceed by 52,804 tons the quantity imported in 1881, and as no doubt the great Mail Steam Companies have laid in their reserves, it is not likely that they will import next year more than is actually required for their annual consumption, so that the tonnage dues on coals are not likely to meet what may be anticipated on the loss of these dues in coffee and rice.

6. Dues, hitherto termed port dues, will necessarily give an increase from the larger number of steamers frequenting the harbour, but these dues will be considerably less than if charged under the present rates, and although the dues collected are estimated to amount to Rs. 73,296—calculated upon the tonnage of the last four months, since the mail steamers have made Colombo their port of call, namely, July, August, September, and October of the current year—they will be less by Rs. 14,430 than if collected under existing rates, and it should be borne in mind that these dues will be a total loss to our general revenue.

7. To summarize the amount that would have been raised had these dues been in force during 1881, my calculations show that Rs. 268,906 would have been collected, and I can only estimate approximately that the amount that may be expected during 1883 will not exceed Rs. 295,840.

I am, &c.,
W. HALLILEY,
Principal Collector.

Enclosures.

A.

RETURN showing approximate receipts, based on the Shipping trade and Imports of 1881.

					Rs.
Port dues					46,362
Inward tonnage of cargo		252,500 tons			
Of goods from India in British India steamers and vessels under 200 tons	203,080 tons				
Say half in vessels under 200 tons		101,500	„ @ 12½ cts.	12,687	
		151,000	„ @ 25 cts.	37,750	
					50,437
Export tonnage					12,514
Harbour and Warehouse dues				Imports ..	121,000
				Exports ...	26,214
				Rs.	256,527
Imports exported	Tonnage		... Rs.	1,074	
	Harbour dues		... „	6,305	
					7,379
					263,906
	Coastwise		...		5,000
				Rs.	268,906

B.

ESTIMATE of Dues leviable at Colombo from 1st January, 1883, under Colombo Harbour Ordinance of 1875.

				Rs.
Port dues, estimated from 4 months in 1882 ...			...	73,296*
Import tonnage ...	Up to 200 tons ...	Rs. 12,687	...	50,437
	Above 200 tons ..	37,750		
Export tonnage ...	Up to 200 tons ...	2,503	...	12,514
	Above 200 tons ...	10,011		
Imports exported ..	Tonnage ...	1,074	...	7,379
	Harbour dues ...	6,305		
Harbour and Warehouse dues ...	...	Imports	...	121,000
		Exports	...	26,214
Estimate for Coastwise trade ...	...		...	5,000
			Rs.	295,840

RETURN CALLED FOR BY THE HON. THE GOVERNMENT AGENT, KANDY.

Loss on Port Dues.

		Rs.	cts.	
July	...	989	72	
August	...	254	66	
September	...	1,909	98	
October	...	1,655	68	
For 4 months	...	4,810	4	Equal to an
Average loss for a month of	...	1,202	51	
Or loss for 12 months of	...	14,430	12	

* This is equal to a loss of Rs. 14,430·12 on present rate of Port dues.

STATEMENT of Port Dues calculated according to the proposed Rates on the number of Vessels arrived in each of the four months ending 31st October, 1882.

Tonnage Schedule.		July, 1882. No. of vessels. Cargo.	Ballast.	With part cargo coastwise.	Commuted.	Total.	Proposed Rate.	Amount.	August, 1882. No. of vessels. Cargo.	Ballast.	With part cargo coastwise.	Commuted.	Total.	Proposed Rate.	Amount.
							Rs. cts	Rs. cts.						Rs. cts.	Rs. cts.
To 50 tons ...	Vessels ...	1	—	—	—	1	2 50	2 50	—	—	—	—	3	2 50	7 50
	Coastwise Vessels		—	—	—				—	—	—	3			
50 to 100 tons	Vessels ...	31	1	—	—	32	5 0	160 0	34	—	—	—	43	5 0	215 0
	Coastwise Vessels	—	—	—	—				1	—	—	8			
100 to 150 „	Vessels ...	12	—	—	—	13	7 50	97 50	32	—	—	—	34	7 50	255 0
	Coastwise Vessels	—	—	—	1				—	—	—	2			
150 to 200 „	Vessels ...	—	—	—	—	0	10 0	—	14	—	—	—	14	10 0	140 0
	Coastwise Vessels	—	—	—	—				—	—	—	—			
200 to 300 „	Vessels ...	1	—	—	—	3	20 0	60 0	5	—	—	—	7	20 0	140 0
	Steamers ...	—	—	—	2				—	—	—	2			
	Coastwise Vessels	—	—	—	—				—	—	—	—			
300 to 400 „	Vessels ...	—	4	1	—	5	30 0	150 0	—	—	1	—	1	30 0	30 0
	Steamers ...	—	—	—	—				—	—	—	—			
400 to 500 „	Vessels ...	—	—	—	—	0	40 0	—	—	1	—	—	1	40 0	40 0
	Steamers ...	—	—	—	—				—	—	—	—			
500 to 700 „	Vessels ...	—	1	—	—	3	50 0	150 0	—	—	—	—	1	50 0	50 0
	Mail Steamers ...	2	—	—	—				1	—	—	—			
700 to 900 „	Vessels ...	—	—	—	—	0	60 0	—	—	—	—	—	0	60 0	—
	Steamers ...	—	—	—	—				—	—	—	—			
	Mail Steamers ..	—	—	—	—				—	—	—	—			
900 to 1,100 „	Vessels ..	—	—	—	—	1	70 0	70 0	—	—	—	—	6	70 0	420 0
	Steamers ...	—	—	1	—				3	—	1	—			
	Mail Steamers ...	—	—	—	—				2	—	—	—			
1,100 to 1,300 „	Vessels ..	—	—	—	—	3	80 0	240 0	—	—	—	—	5	80 0	400 0
	Steamers ...	2	—	—	—				2	—	—	—			
	Mail Steamers ..	1	—	—	—				3	—	—	—			
1,300 to 1,500 „	Steamers ...	2	1	—	—	8	90 0	720 0	2	—	2	—	5	90 0	450 0
	Mail Steamers ..	4	—	1	—				1	—	—	—			
	Vessels ..	—	—	—	—				—	—	—	—			
1,500 to 1,800 „	Vessels ..	—	—	—	—	9	100 0	900 0	1	—	—	—	10	100 0	1,000 0
	Steamers ..	1	1	—	—				2	1	—	—			
	Mail Steamers ...	7	—	—	—				5	—	1	—			
Above 1,800 „	Steamers ...	9	1	—	—	23	120 0	2,760 0	5	2	—	—	22	120 0	2,640 0
	Mail Steamers ...	13	—	—	—				15	—	—	—			
						101		5,310 0					152		5,787 50
					Collection for July ...			6,299 72				Collection for August ...			6,042 16
					Difference ...			989 72				Difference ...			254 66

Tonnage Schedule.		September, 1882. No. of vessels. Cargo.	Ballast.	With part cargo coastwise.	Commuted.	Total.	Proposed Rate.	Amount.	October, 1882. No. of vessels. Cargo.	Ballast.	With part cargo coastwise.	Commuted.	Total.	Proposed Rate.	Amount.
							Rs. cts.	Rs. cts.						Rs. cts.	Rs. cts.
To 50 tons ...	Vessels ...	2	—	—	—	3	2 50	7 50	2	—	—	—	2	2 50	5 0
	Coastwise Vessels	—	—	—	1				—	—	—	—			
50 to 100 tons	Vessels ...	51	—	—	—	55	5 0	275 0	26	—	—	—	29	5 0	145 0
	Coastwise Vessels	—	—	—	4				2	—	—	1			
100 to 150 „	Vessels ...	30	—	—	—	31	7 50	232 50	31	—	—	—	32	7 50	240 0
	Coastwise Vessels	—	—	—	1				—	—	—	1			
150 to 200 „	Vessels ...	10	—	—	—	10	10 0	100 0	9	—	—	—	9	10 0	90 0
	Coastwise Vessels	—	—	—	—				—	—	—	—			
200 to 300 „	Vessels ...	4	1	—	—	7	20 0	140 0	2	—	—	—	4	20 0	80 0
	Steamers ...	—	—	—	1				—	—	—	2			
	Coastwise Vessels	1	—	—	—				—	—	—	—			
300 to 400 „	Vessels ...	1	1	—	—	3	30 0	90 0	—	1	—	—	1	30 0	30 0
	Steamers ...	1	—	—	—				—	—	—	—			
400 to 500 „	Vessels ...	—	—	—	—	0	40 0	—	2	—	—	—	2	40 0	80 0
	Steamers ...	—	—	—	—				—	—	—	—			
500 to 700 „	Vessels ...	—	1	—	—	1	50 0	50 0	2	—	—	—	2	50 0	100 0
	Mail Steamers ...	—	—	—	—				—	—	—	—			
700 to 900 „	Vessels ...	1	—	—	—	1	60 0	60 0	1	—	—	—	1	60 0	60 0
	Steamers ...	—	—	—	—				—	—	—	—			
	Mail Steamers ..	—	—	—	—				—	—	—	—			
900 to 1,100 „	Vessels ..	—	—	—	—	5	70 0	350 0	—	—	—	—	5	70 0	350 0
	Steamers ...	—	1	1	—				4	—	—	—			
	Mail Steamers ...	3	—	—	—				1	—	—	—			
1,100 to 1,300 „	Vessels ..	—	—	—	—	4	80 0	320 0	—	—	—	—	3	80 0	240 0
	Steamers ...	1	—	—	—				—	—	1	—			
	Mail Steamers ..	3	—	—	—				2	—	—	—			
1,300 to 1,500 „	Steamers ...	1	1	1	—	5	90 0	450 0	5	—	—	—	12	90 0	1,080 0
	Mail Steamers ..	1	—	1	—				6	—	—	—			
	Vessels ..	—	—	—	—				1	—	—	—			
1,500 to 1,800 „	Vessels ..	—	—	—	—	11	100 0	1,100 0	—	—	—	—	13	100 0	1,300 0
	Steamers ..	1	1	—	—				5	1	—	—			
	Mail Steamers ...	9	—	—	—				7	—	—	—			
Above 1,800 „	Steamers ...	9		—	—	23	120 0	2,760 0	15	—	—	—	30	120 0	3,600 0
	Mail Steamers ...	14	—	—	—				15	—	—	—			
						159		5,935 0					145		7,400 0
					Collection for September ...			7,844 98				Collection for October ..			9,055 68
					Difference ...			1,909 98				Difference ..			1,655 68

STATEMENT showing the Port Dues collected at the Port of Colombo in 1881, and also according to the proposed Rates.

Tonnage Schedule.		Number of Vessels. Cargo.	Ballast.	With part cargo Coastwise.	Com-muted.	Total Vessels.	Tonnage.	Inwards. Amount. Rs. cts.	Outwards. Amount. Rs. cts.	Total. Rs. cts.	Total number of Vessels.	Proposed Rate. Rs. cts.	Amount. Rs. cts.
To 50 tons ...	Vessels ...	62	1	3	—	66	2670	201 60	47 28	248 88	146	2 50	365 0
	Coastwise Vessels ...	20	1	—	59	80	1860	77 28	39 2	116 30			
50 to 100 tons ...	Vessels ...	581	1	1	—	583	42155	3,180 38	1,527 68	4,708 6	654	5 0	3,270 0
	Coastwise Vessels ...	32	2	—	37	71	3234	234 80	275 66	510 46			
100 to 150 „ ...	Vessels ...	307	2	1	—	310	32625	2,610 0	1,338 24	3,948 24	317	7 50	2,377 50
	Coastwise Vessels ...	2	—	—	5	7	766	21 28	39 68	60 96			
150 to 200 „ ...	Vessels ...	98	—	—	—	98	18648	1,491 84	883 24	2,375 8	104	10 0	1,040 0
	Coastwise Vessels ...	6	—	—	—	6	903	126 0	72 96	198 96			
200 to 300 „ ...	Vessels ...	27	—	1	—	28	6179	494 32	236 88	731 20	38	20 0	760 0
	Steamers ...	—	1	—	—	1	266	—	—	—			
	Coastwise Vessels ...	—	—	—	9	9	1800	—	183 10	183 10			
300 to 400 „ ...	Vessels ...	4	—	—	—	4	1467	117 36	205 44	322 80	6	30 0	180 0
	Steamers ...	—	—	1	1	2	732	183 0	—	183 0			
400 to 500 „ ...	Vessels ...	1	4	3	—	8	3241	38 96	255 12	294 8	9	40 0	360 0
	Steamers ...	—	1	—	—	1	366	—	—	—			
500 to 700 „ ...	Vessels ...	4	8	1	—	13	7583	186 72	509 44	696 16	15	50 0	750 0
	Steamers ...	1	1	—	—	2	1183	40 40	54 24	94 64			
700 to 900 „ ...	Vessels ...	8	—	1	—	9	6475	518 0	128 72	646 72	16	60 0	960 0
	Steamers ...	4	1	—	—	5	4070	257 20	138 24	395 44			
	Mail Steamers ...	2	—	—	—	2	1648	100 0	100 0	200 0			
900 to 1,100 „ ...	Vessels ...	3	3	—	—	6	6101	240 48	240 48	480 96	29	70 0	2,030 0
	Steamers ...	14	—	6	—	20	19639	1,067 68	334 48	1,402 16			
	Mail Steamers ...	3	—	—	—	3	3122	150 0	150 0	300 0			
1,100 to 1,300 „ ...	Vessels ...	1	—	2	—	3	3151	100 8	80 64	180 72	44	80 0	3,520 0
	Steamers ...	14	—	4	—	18	16573	1,137 52	386 88	1,524 40			
	Mail Steamers ...	14	—	9	—	23	29070	700 0	700 0	1,400 0			
1,300 to 1,500 „ ...	Steamers ...	17	—	2	—	19	27260	1,835 4	697 28	2,532 32	87	90 0	7,830 0
	Mail Steamers ...	53	—	15	—	68	91248	2,650 0	2,600 0	5,250 0			
1,500 to 1,800 „ ...	Vessels ...	1	—	1	—	2	3375	132 88	137 12	270 0	90	100 0	9,000 0
	Steamers ...	31	—	8	—	39	61477	3,630 52	3,392 28	6,022 80			
	Mail Steamers ...	29	—	20	—	49	77098	1,400 0	1,700 0	3,100 0			
Above 1,800 „ ...	Steamers ...	79	1	3	—	83	172545	13,159 4	6,740 96	19,900 0	116	120 0	13,920 0
	Mail Steamers ...	18	1	14	—	33	71032	850 0	1,000 9	1,850 0			
	Coasting Vessels ...	—	—	—	—	—	—	—	161 60	161 60			
									Total ... ... Rs.	60,289 4	1,671	Rs.	46,362 50
									Deduct Total of proposed Rates ...	46,362 50			
									Difference ... ... Rs.	13,926 54			

W. HALLILEY,
Acting Principal Collector of Customs.

COLOMBO HARBOUR WORKS.

The Right Hon. the Earl of KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

No. 409.—*Ceylon.* Downing-street, 1st December, 1882.

SIR,—WITH references to your despatches No. 317 of the 31st of July last and No. 403 of the 23rd of September, and your telegram of the 14th of November, I have the honour to transmit to you a copy of two letters from this Department to the Crown Agents, together with two letters from these gentlemen, the latter enclosing a further report from the Consulting Engineer on the question of the completion of the Colombo Harbour Works.

It now rests with your Government to determine the course which should be followed in this matter.

You will see that Sir John Coode and the Agents suggested that you should be informed by telegram of the general purport of his report, but I have thought it best that you should be furnished with the whole correspondence before entering on the further discussion of the question.

I have, &c.,
KIMBERLEY.

Enclosure No. 1.

The COLONIAL OFFICE to the CROWN AGENTS.

Downing-street, 12th September, 1882.

GENTLEMEN,—WITH reference to your letter of the 18th of August, and to previous correspondence on the subject of the Colombo Harbour Works, I am directed by the Secretary of State for the Colonies to transmit to you (in original, for return) the accompanying despatch and enclosures from the Governor of Ceylon.

In communicating these papers to Sir J. Coode for his remarks, you will state, that with the strong expression of Sir James Longden's opinion before him, Lord Kimberley does not feel prepared to press the Colonial Government to make any larger contribution from the diminished revenue of the country for the purpose of the immediate completion of Sir. J. Coode's design B. I am at the same time to request that Sir. J. Coode will favour his Lordship with his observations on Sir J. Longden's suggestions generally, and especially with regard to the expediency of proceeding at once with the concrete capping for the breakwater northward of the harbour wall, and as to the retention of the dredger and other plant by the Ceylon Government.

It would also be useful to the Colonial Government to learn what further sum should, in Sir J. Coode's opinion, be added to his estimate for the construction of the North Arm, now that it is not to be built immediately as part of the works now in hand.

I am, &c.,
R. H. MEADE.

Enclosure No. 2.

The COLONIAL OFFICE to the CROWN AGENTS.

Downing-street, 15th November, 1882.

GENTLEMEN,—WITH reference to the letters from this department of the 12th of September and the 31st of October, I am directed by the Earl of Kimberley to transmit to you, for the consideration of Sir J. Coode, the enclosed copy of a telegram which has been received from the Governor of Ceylon on the subject of the Colombo Harbour Works. *

Lord Kimberley will be glad to receive an answer to the letter of 12th September last at Sir J. Coode's early convenience.

I am, &c.,
R. H. MEADE.

Enclosure No. 3.

The CROWN AGENTS to the COLONIAL OFFICE.

Downing-street, London,
21st November, 1882.

SIR,—IN reply to your letter of the 15th instant, I have the honour to state, for the information of the Earl of Kimberley, that we have received a letter from Sir John Coode stating that the letter from the Resident Engineer of the Colombo Breakwater Works of the 6th of

* Not printed.

October, with its enclosures, to which reference is made in Sir James Longden's telegram, did not reach him until the 14th instant, and that the data furnished by Mr. Kyle require some consideration as regards the calculation of quantities, &c., which will occupy some days.

Sir John Coode promises, however, to lose no time in reporting upon the subject.

I have, &c.,
E. E. BLAKE.

Enclosure No. 4.

The Crown Agents to the Colonial Office.

Downing-street, London,
30th November, 1882.

Sir,—With reference to your letter of the 15th instant relative to certain proposals of the Chief Resident Engineer of the Colombo Harbour Works for reducing the cost of the north arm, I have the honour to forward a copy of Sir John Coode's report, and to return the original papers which we were requested to refer to him.

2. Sir John Coode, after that careful examination of the proposed alterations which his responsibility for the success of this important work demands, is unable to give his sanction to the reduction in the section of the north arm by which its cost might be brought within the limit of expenditure laid down by the Ceylon Legislature. He points out, however, that the work of the south-west arm has been executed at a rate so considerably below that on which his estimate for design B. was fixed, that he is able to reduce that estimate from £1,008,458 to £903,710, a sum which may be susceptible of some slight further diminution on account of the value of the unclaimed land. It appears to us undesirable that credit should be taken for value of plant and machinery, inasmuch as whatever is not retained by the Government will probably realise on sale an altogether insignificant sum.

3. Sir John Coode's revised estimate places the cost of building the north arm, which he states he regards as "an essential part of the scheme," at £103,710 above the proposed limit of £800,000, but he adds that this additional expense will be increased to the extent of nearly 40 per cent. by the necessity for renewing plant and machinery if the construction of the north arm is postponed for any considerable time. This serious increase of cost appears to us to be an important element for consideration in deciding whether the work is to be suspended; and it must also be remembered that a suspension involves the dispersion of a tried and acclimatized staff, collected with much difficulty, and thoroughly conversant with every detail of the work and each local condition affecting it. Above all, it may mean the loss of the services of Mr. Kyle, the Resident Engineer, to whose marked ability the successful and economical prosecution of the works has been largely due.

4. Sir John Coode suggests the following telegram to the Governor:—

"Coode estimates gross outlay, including north arm, nine hundred and three thousand pounds, and without north arm seven hundred and seven thousand, capping included; plant and reclamation not credited."

It appears to us, however, that it is difficult to place the Ceylon Government, by means of a telegram, sufficiently fully in possession of the Consulting Engineer's views to enable the Council to deal usefully with the subject; if, however, it should be decided to telegraph, it would seem desirable to add a few words stating that Sir John Coode cannot approve of the proposed alterations to the north arm, and that any considerable postponement of the work will add £40,000 to his figures.

I have, &c.,
M. F. OMMANNEY.

Sub-Enclosure in Enclosure No. 4.

Sir J. Coode to the Crown Agents.

5, Westminster Chambers, S.W.,
25th November, 1882.

Gentlemen,—Your letter of 16th September, transmitting copy of letter from the Colonial Office, together with a despatch and enclosures from the Governor of Ceylon, reached me in due course.

2. I am also in receipt of your letters of 17th and 21st instant, transmitting copies of telegrams received from Sir J. Longden upon the subject of Colombo harbour. These telegrams refer to certain reductions in the estimates of cost sent home by Mr. Kyle, and it desired to know whether I am prepared to adopt the figures which he has submitted.

3. With regard to the latter point, I may observe that Mr. Kyle's estimates reached me only on the 14th instant, and as the subject under consideration is one of great importance, affecting not only the cost but also the security of the north arm, and moreover, as calculations of quantities, &c., were necessary, I have been unable until now to frame my report, or to furnish you with the means of replying to Sir J. Longden's telegrams.

4. Whilst I am most anxious to reduce the outlay on the works to bring it, if possible, within the limit of £800,000 named by the Colonial Government, feeling as I do that the north arm will add immensely to the utility of the harbour, and therefore that it ought to be regarded as an essential part of the scheme, it nevertheless devolves upon me not to curtail the strength of this, or any portion of the works, to such an extent as would jeopardize their safety.

5. After careful consideration, I regret that I cannot follow Mr. Kyle to the full extent which he contemplates in the way of reduction of cost. He has shown that a considerable saving

will be effected in the execution of the works sanctioned, a result which is attributable to three causes, viz. :—

1st.—To the favourable character of the two last block-setting seasons, and to the consequent rapid progress with the south-west breakwater during those periods—a length of 946 feet was added in the north-east monsoon of 1880-81, and 952 feet in 1881-82, the previous average rate of progress of the sea wall per season having been 366 feet.

The number of working days at the breakwater end in 1880-81 was 130, and in 1881-82 129, whilst in 1878 and 1879 there were only 23 days on which blocksetting could be carried on.

2nd.—The estimate for design B., prepared in September, 1878, was based upon the rate of progress previous to that time, which rate has been *greatly* exceeded during the last two seasons, as above explained, and consequently the actual cost has been much below that which was estimated.

3rd.—The energetic and skilful local direction by Mr. Kyle—who, at the sacrifice of his health has, from the first, unsparingly devoted himself to the undertaking—has largely contributed to the economy which has been effected. I ought also to recognize the fact that the exertions of the staff on the works have been most praiseworthy.

6. The section I propose to adopt for the north arm is as simple in details of construction as it is possible to make it, nor can the cubic contents be curtailed without, in my opinion, jeopardizing the security of the work.

7. Whilst, therefore, there can be no question as to the saving on the works already sanctioned, provided the present monsoon is one of average character, I cannot see my way to the reduction of the outlay on the north arm to a greater extent than is contemplated in the following estimate, which is based upon the average cost from the commencement to the present time :—

	£.
Total expenditure to 31st August, 1882, Rs. 6,506,128 (*@* 1*s.* 8*d.* ...	— 542,177
Completion of south-west breakwater, including head and lighthouse, concrete capping throughout entire length of breakwater, completion of dredging to the extent now sanctioned, and provision of moorings	164,837
Equal (*@* 1*s.* 8*d.* Rs. 8,484,168 ...	£ 707,014
North arm, monied out at the reduced rates based upon the actual *average* cost up to the present time, including head, lighthouse, and small jetty as in the case of the south-west breakwater ...	196,696
Equal (*@* 1*s.* 8*d.* Rs. 10,844,520 ...	£ 903,710

8. It will be observed that I have included in the above estimate the cost of the concrete capping. As explained in my report of 31st March, 1881, its omission "would not affect the security of the breakwater, although the finished road surface which it would afford would not be available."

9. No deduction has been made in the foregoing estimate for the value of the plant, dredger, and floating craft when done with, nor for the value of the land reclaimed, nor for the profit which, as I gather from Mr. Kyle, the Railway Department has made out of the carriage of the stone from Mahara quarry. All these items might, I consider, be fairly placed to the credit of the Harbour Works. I gather from the documents, it is the wish of the Colonial Government that the sum named should be the *gross* amount required to be raised, which may be taken at the amount I have stated.

10. I certainly never contemplated the sale of the dredger, nor of any portion of the plant, either floating or otherwise, until it was perfectly clear that such plant would no longer be required for the purposes of the works, when it would be sold or transferred to the maintenance department, and credit given to the construction account accordingly.

11. It is difficult to state what sum should be added to the cost of the north arm as hereinbefore given, if this work be not taken in hand by the present staff and with the plant now available without a break.

If prior to the construction of the north arm a sufficient interval should elapse to render necessary the purchase of new stone waggons, quarry cranes, concrete machinery, titan for block loading, floating craft and other plant (which would be available if the work were undertaken without interruption, but might from lying by be seriously injured or perhaps rendered useless by the time they were required) a very serious amount of extra expenditure to refit and provide new plant would have to be incurred, say to the extent of about £40,000.

If the works were deferred for a year or two the addition to the estimate would be much less, say from £10,000 to £15,000 supposing the plant were properly kept up in the meantime. In a climate like that of Ceylon there is quite as much depreciation in plant when standing idle in the open as when regularly employed in the execution of work.

12. I am pleased to find from Mr. Kyle's last monthly report that the Government of Ceylon have given instructions for the extension of the reclamation along the eastern shore. I am still of opinion that it will be for the interest of the colony to extend this reclamation to the northern end of the Sea-shore street, as was indicated on the plans which accompanied my report of 30th September, 1878.

I have, &c.,

JOHN COODE.

XXXIII.—1882.

CORRESPONDENCE

RESPECTING A

PROSECUTION UNDER THE KANDYAN MARRIAGE LAW.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

CORRESPONDENCE

RESPECTING

A PROSECUTION UNDER THE KANDYAN MARRIAGE LAW.

No. 1.

The Hon. T. BERWICK, Commissioner of Assize, to Governor Sir J. R. LONGDEN, K.C.M.G.

Kurunégala (on Circuit),
26th August, 1882.

HON. SIR,—A CASE has been tried at the present Kurunégala Assize which gives reason to apprehend that, in consequence of a mistranslation in the Siṇhalese copy of the Kandyan Marriage Ordinance, 3 of 1870, all, or nearly all, of the marriages intended to have been solemnized under it before the native registrars are invalid, and that the issue of these supposed marriages are illegitimate. The matter is so serious that I think it incumbent on me to lay the matter before your Excellency fully, in case your Excellency may be advised to introduce an Ordinance legalizing past marriages at present invalid on that ground, and meanwhile to direct the Siṇhalese copies of the Ordinance now in the hands of the registrars to be withdrawn.

2. In the case in question, a woman, *Opalangu*, was charged with polyandry, and in the same indictment a man, *Menika*, was charged with having counselled her thereto. The case for the prosecution was that Opalangu married Menika on the 20th May, 1879, during the lifetime of Menika's brother, *Sirimalle*, to whom she had been already married on the 12th June, 1874. The prosecution was under section 27 of Ordinance 3 of 1870.

3. The official registers of both the alleged marriages were produced, and the signatures and the identity of parties duly proved, as well as the fact of Sirimalle being alive. The prisoners were, however, acquitted on the ground that in point of fact no valid marriage had ever been contracted or solemnized between Opalangu and Sirimalle, inasmuch as the words of the present contract required by the Ordinance in order to constitute actual marriage had not been observed, but other words substituted which do not imply an immediate and actual marriage.

4. The acts and facts necessary to constitute marriage are prescribed by section 20 of the Ordinance, thus:—

"Nothing appearing to hinder the registration of the marriage, the registrar shall, in the presence of the witnesses, say to the man in the language of the parties, and causing him to take the woman by the hand: 'Do you take this woman to be your wedded wife?' On the man answering in the affirmative, the registrar shall say to the woman in the language of the parties, and causing her to take the man by the hand: 'Do you take this man to be your wedded husband?' "

5. But at the trial the registrar who solemnized the supposed (prior) marriage of 1874 deposed as follows:—

"Before they signed the register I asked the man, Sirimalle, whether he was willing to marry the woman, Opalangu, then present; and he said he was willing. I then asked her whether she was willing to marry him, and she said she was. I did not cause the man to take the woman by the hand while I put the question, or *vice versâ*.

"The question I put to the man was in Siṇhalese, being his own language, and was put in these words: *Mé Opalangu samage Sirimalle umba casadi bandata kematida?* I did not ask him whether he did *then* take Opalangu to be his wife, nor any words to that effect, or in the present tense.

"The question was put by me in the same form to the woman."

6. The above Siṇhalese words, literally translated and transposed according to English grammar, signify this: "Sirimalle, are you willing to marry with this Opalangu?"; words, the affirmative answer to which obviously imports a mere desire or willingness to marry the woman, and leaves it indefinite whether he was willing to marry her immediately or at some future time, but neither amounts to any express promise to marry her at any time, nor constitutes a declaration that he then solemnly and actually took the woman to be his wife, which is the solemn declaration required by the law. It can hardly or barely be said that the declaration amounted even to a promise *de futuro*; it certainly was not a declaration of marriage *de presente*.

7. Nor do I think this a case in which the courts are enabled to construe words (as they generally may) in the sense of the supposed intention of the parties, and so give effect to the supposed intention. Generally speaking, when a statute prescribes a certain formula merely by way of example, it adds "or words to that effect," or some similar expression. But this Ordinance contains no such qualification, but requires that the very words it prescribes as a special formula shall be used, and no others. And the reasons for the requirement seem to me very clear. In a matter of such importance, and in prescribing a particular solemnity, it was necessary to exclude any discretion on the part of the registrar or the parties, in order to prevent the possibility of any evasion or deception, or of any uncertainty as to either the intention or the legal effect of the words actually used. It was also especially necessary, and it was doubtless the intention of the Legislature distinctly to abolish the rule of the Canon Law (adopted in European civil jurisprudence), whereby a present marriage is deemed to be constituted under certain circumstances of cohabitation by a mere promise *de futuro*.

8. The same invalidity attended the supposed subsequent marriage with the brother Menika. The registrar who intended to solemnize it deposed as follows : -

"I asked Opalangu, 'Have you been previously married ?' She said she had not She said she was living with Menika as husband and wife, but not as married. (*Q.*)—'What form of marriage did the parties go through ?' (*A.*)—'I got them to take hold of each other's hands, and asked the woman, *Mé purushaya swámi purushyá-koṭa páwaqánta kematida ?' (Anglici :* Are you *willing* to take this man as your husband ?) I asked the man in similar form, and both answered in the affirmative. I did not ask the woman, Do you *now* take this man to be your husband ?"

9. On sending to the Kachchéri for a copy of the Siṇhalese version of the Ordinance, I found that both the registrars had followed the meaning and effect of the formula as there mistranslated (but not the exact terms of it, other words having been substituted by them for some of those in the Siṇhalese printed version), and I understand that the version shown me is the only version which has been distributed to the native Siṇhalese registrars, and that the mistranslation therein has probably been more or less closely followed in the case of every Kandyan marriage before a registrar since the date of the Ordinance, that is to say during the last twelve years or so.

10. The matter is of such great importance, as affecting legitimacy and the descent of property amongst a large portion of the population, that although I myself entertained no doubt of the invalidity of Opalangu's supposed marriages on the above ground, I thought it desirable that the question should be reserved for the opinion of the Judges collectively, and therefore preferred to leave it to the jury as a matter of doubt on which other Judges might possibly entertain a different opinion from myself, and recommended them to deal with the case on the assumption that the supposed prior marriage with Sirimalle was not invalid, telling them at the same time that if, acting on this assumption as advised, they should find the prisoners guilty, I would postpone sentence till a future sessions, and submit the point for the opinion and decision of the Judges. I told them also that it was very desirable that they should adopt this course in order to obtain an authoritative decision on a matter of such importance to so large a portion of the public. The jury, however, chose to act on their own opinion of the law, and acquitted the prisoners. On my asking them the ground of the acquittal, they stated, through their foreman, that the woman had not been lawfully married either to Sirimalle or to Menika ; and on my asking them further whether their conclusion was based on what I had intimated to be my own individual opinion as then advised, or on their independent opinions of the law irrespective of mine, they stated that it was their own opinion after having discussed the question among themselves. I did not think it necessary or expedient to interfere further by asking them to reconsider their verdict, although I regretted that their action in disregarding my recommendation prevented a solemn decision of the point by the Judges, at least in the present case.

11. It is right that I should not pass over, without reference thereto, section 39 of the Ordinance, which provides that an entry in the register of marriages shall be the *best evidence* of the marriage contracted by the parties, and of the other facts stated therein. But evidence or testimony is one thing, proof is quite another. And this clause, in this as in other Ordinances, means, not that the entry in the register shall be *conclusive proof* of the facts stated therein, but merely that it shall be the best *primâ facie evidence* thereof, liable, like all other testimony, to be rebutted by proof to the contrary. And so (*e.g.*) proof of forgery would rebut the *primâ facie* evidence afforded by the entry in the register. The word "best" has a technical meaning which need not be here referred to further than to note that it has nothing to do with the liability of evidence to be rebutted by proof to the contrary. This section of the Ordinance therefore does not, in my opinion, mend the present matter.

I have, &c.,
T. BERWICK,
Commissioner of Assize.

Enclosure.

MEMORANDUM.

Formula required by Ordinance No. 3 of 1870.

"Do you take this woman to be your wedded wife ?"
"Do you take this man to be your wedded husband ?"

Formula in Siṇhalese Version of the Ordinance.

"Mé istrí nuba Bhayargáwa-men páwáganṭa nuba kematida ?"
"This woman you wife-as to take you willing ?"
[*I.e.*, (*Are*) you willing to take this woman as wife ?]

Formula used by Registrar of the first Marriage.

Mé Opalangu samage Sirimalle nuba casada bandata kematida?
This Opalangu with Sirimalle you to marry willing ?
[*I.e.*, Sirimalle I (*are*) you willing to marry with this Opalangu ?]

Formula in Siṇhalese Version.

Mé purushyá nubé swámi-purushyá-koṭa páwáganṭa nuba kematida ?
This man your lord-man-as to take you willing ?
[*I.e.*, (*Are*) you willing to take this man as your lord-man ?]

Formula used by Registrar of second Marriage.

Mé purushayá purushayá-koṭa páwáganṭa kematida?
This man man-for to take willing?

[*I.e.*, (*Are you*) willing to take this man for (*your*) man?

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1. In each case the registrar adopted the error that the Siṇhalese version of the Ordinance contains, namely, the substitution of the words "Are you *willing* to take?" for the words of the Ordinance, "*do* you take?"

2. In neither case did the registrar adhere even to the exact words of the Siṇhalese version.

3. In one case the registrar omitted the solemnity required by law, of causing the parties about to marry to take each other by the hand as they speak the words of marriage (*i.e.*, the words declaratory of the *then* constitution of the marriage).

4. It is, however, only the first matter—the discrepancy between the formula prescribed by law and that given in the Siṇhalese version of the Ordinance—which has probably produced such universal mischief as to demand legislation to legalize past intended marriages.

T. B.

26th August, 1882.

No. 2.

The Hon. the COLONIAL SECRETARY to Maha Mudaliyár L. DE ZOYSA, Chief Translator to Government.

Colombo, 1st September, 1882.

SIR,—I AM directed to refer to you the enclosed letter from the Hon. T. Berwick, Commissioner of Assize, respecting an alleged mistranslation in the Kandyan Marriage Ordinance No. 3 of 1870, and I am to request you to state the exact meaning which the words in the Siṇhalese version convey.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

No. 3.

Maha Mudaliyár L. DE ZOYSA, Chief Translator to Government, to the Hon. the COLONIAL SECRETARY.

Kosgoḍa, 9th September, 1882.

SIR,—WITH reference to your letter of the 1st instant, referring one from the Hon. T. Berwick, Commissioner of Assize, respecting an alleged mistranslation in the Kandyan Marriage Ordinance No. 3 of 1870, and requesting me to state the exact meaning which the words in the Siṇhalese version convey, I have the honour to submit the following.

I find the words in the English Ordinance (section 20) "Do you take this woman to be your wedded wife?" and "Do you take this man to be your wedded husband?" are respectively rendered in the Siṇhalese version: "Mé strí nubé bharyáwa men páwáganṭa nuba kematida?" and "Mé purushayá nubé swámi purushayá koṭa páwáganṭa nuba kematida?" which words mean "Are you willing to take this woman as your wife?" (equivalent to "Do you wish to take this woman as your wife?") and "Are you willing to take this man as your husband?" (equivalent to "Do you wish to take this man as your husband?"). The words are idiomatically rendered, though not literally, and convey the same meaning as the English words, "Do you take," &c., and imply as much "present contract," in my opinion, as the English words do.

The English words, "Do you take this woman to be your wife?" might be more literally, and though, perhaps, less idiomatically, rendered—"Mé strí nubé bharyáwa men nuba páwágannawáda?"; but the objection urged by Mr. Berwick, that the Siṇhalese words in the Ordinance do not imply a "present contract," might hold good against this latter rendering also, inasmuch as the Siṇhalese verb "gannawáda" might be taken in the present or future tense ("Do you take, or will you take"), *the tense being determined by the context or the circumstances of the case.* In the present case I do not think, when the words are addressed by the registrar to the parties about to be married, that any one could misunderstand that the words do not imply a "present contract."

I may be permitted to add that the Kandyan Marriage Ordinances were translated at Kandy at the special request of the Government Agent there, and not by the translators attached to the Colonial Secretary's Office. This was done on the ground that translations of Ordinances made by translators in Colombo were not so intelligible to Kandyans as those prepared by persons well acquainted with the Kandyan idiom.

I have, &c.,
L. DE ZOYSA,
Chief Translator to Government.

No. 4.

OPINION of Mr. GUṆASÉKARA.

WITH regard to rendering "páwáganta kematida," my own opinion is that it is the *idiomatic* rendering of "Do you take," and not a mistranslation of it. The literal translation would be "*gannawáda*," but this does not necessarily mean a "*present* contract." This form of the verb is used both in the present and future tense, and sometimes to express *volition*, as in the phrase "Umba mata iméka *denawáda?*"—"Will you give me this (now)?"

B. GUṆASE'KARA.

13th September, 1882.

No. 5.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Hon. T. BERWICK, Commissioner of Assize.

Colombo, 21st September, 1882.

HON. SIR,—I HAVE the honour to acknowledge the receipt of your letter of the 26th ultimo respecting an alleged mistranslation in the Siṇhalese version of the Kandyan Marriage Ordinance No. 3 of 1870, and to state that I caused your letter to be referred to Maha Mudaliyár Louis De Zoysa and to Pundit Guṇasékara, the translator in the Colonial Secretary's Office, and I annex for your information copies of their reports thereon.

I shall be obliged by your informing me whether your opinion that the Siṇhalese version of the Ordinance in question contains a mistranslation is founded on your own knowledge of Siṇhalese, and if not, on what authority it is founded.

I have, &c.,
J. R. LONGDEN.

No. 6.

The Hon. T. BERWICK, Commissioner of Assize, to Governor Sir J. R. LONGDEN, K.C.M.G.

Batticaloa (on Circuit),
4th October, 1882.

HON. SIR,—IN reply to your Excellency's letter of the 21st ultimo, I have the honour to say that my own knowledge of Siṇhalesê was sufficient to enable me to perceive that the Siṇhalese version of the Kandyan Marriage Ordinance does not conform either to the English text or sense of the formula prescribed by that Ordinance for the constitution of marriage; but that when intimating my opinion to your Excellency on the validity of the supposed marriages which were the subject of trial before me at Kurunégala, and consequently of all other Kandyan marriages celebrated in accordance with the same erroneous version, I did not act on my personal knowledge of that language, but on the interpretation conveyed by the Siṇhalese interpreter at the trial, and on the opinions of the Siṇhalese and other gentlemen who composed the jury, whose verdict of acquittal proceeded, as they informed me in court, on their own knowledge of the two languages—Siṇhalese and English—and on their own interpretation of the English and Siṇhalese words respectively, and on their *unanimous* opinion that there had been no marriage in fact, for the reason that the legislatively-prescribed formula had not been followed, and that the Siṇhalese version used by the marriage registrar was neither a true rendering of that formula, nor one which imported an acknowledgment by the parties before him that the man then took the woman to be his wife, and *vice versâ*.

2. This opinion, that there was no valid marriage,—which derives great importance from its being the expression of the common sense of 13 educated and intelligent natives, given in direct opposition to my recommendation to them to find a verdict of guilty, and to leave the question of the validity of the marriages to be determined by the full court in Colombo,—this opinion is, to my mind, entirely confirmed by the reports of the Maha Mudaliyár and Mr. Guṇasékara with which your Excellency has favoured me, and after perusing these I have hardly any remaining doubt that if the question should on a future occasion formally arise for judicial decision by the Collective Court, it will probably be decided in accordance with the view I have already intimated to your Excellency, for the Maha Mudaliyár (after quoting the words of the Siṇhalese version) says, "which words mean '*Are you willing to take this woman as your wife?*' equivalent to '*Do you wish to take this woman as your wife?*' and '*Are you willing to take this man as your husband?*'" This interpretation of the Siṇhalese version, which is the same that was put on it at Kurunégala, being thus established, it is no longer a question of the meaning of Siṇhalese but of English words; and that is a question which the Judges will determine on their own knowledge of the English language, and is one which has nothing to do with any special knowledge of any other language. I do not think that any English court would hold that either a "wish" or being "willing" to enter into matrimony, or any other contract, any more than the wish or being willing to go to a particular place, or to do any act whatever, is the same as doing it.

3. The Maha Mudaliyár, after giving the above rendering of the Siṇhalese version, nevertheless adds that the Siṇhalese words imply as much "present contract," in his opinion, as the

English words do; but with becoming deference to him, this is just exactly what the English words above given do *not* do.

4. In further discussing the matter in a sense inferring the validity of the marriages, the Maha Mudaliyár and Mr. Guṇasékara admit that the English formula has not been "literally," though they say it has been "idiomatically" rendered, and they say (in effect) that a literal translation would, on account of a Siṇhalese idiom, have admitted of two conflicting interpretations, because the word *gannawa* (take) they say, stands for either the present or the future tense of the verb.

But it seems to me that these learned gentlemen, while confining their regard to the Siṇhalese, wholly overlook the chief point in issue, which is the meaning *in the English language* of the very English interpretation they have themselves given to the Siṇhalese words, namely, "Are you willing to take," and more particularly of the English word "willing," which is not in the Ordinance at all, but has, without any warrant, been introduced into the Siṇhalese version by its Siṇhalese equivalent *kemati*, and is correctly reproduced by them in their translation of that version. And it is the unauthorized foisting of that word "*kemati*" (willing,) into the Siṇhalese version of the marriage formula which is the cause of all the mischief.

5. Beyond all question, the word *páwáganawa* is properly the present participle, or (with the auxiliary verb understood) the present indicative of the verb which signifies the English verb "take"; and *páwágaṇṭa*, the infinitive form of that verb, and the words which we have in the Siṇhalese version, namely, *páwágaṇṭa kemati-da*, properly signify "willing to take." The affix "*da*" is merely the sign of the interrogative, and converts the meaning into "are you willing to take?" When these gentlemen observe (in substance) that if the English interrogation "Do you take" had been, as it might have been, *literally* rendered by *gannawá-da*, the version would have been ambiguous, inasmuch as the present tense is (I believe improperly) used when the future tense is meant, and "the Siṇhalese verb *gannawá-da* might either be taken in the present or in the future tense," it seems to me that this vulgar impropriety (for such I believe it to be) is no more than if an Englishman were to say, "I am giving B. a lease of my house," or, "I am taking over the furniture of a house at a valuation," not meaning thereby that he was at the very moment of speaking executing a lease, or taking possession of the furniture, but merely that the intention had been determined on and that the thing would be done at a future day. But even if this can be considered ambiguous, and if a vulgar colloquialism in the use of the word *gannawá-da* would leave it really ambiguous whether the present or future was meant, and for that reason there would be any ambiguity in the literal rendering of the English formula "do you take" by the Siṇhalese words *umba* or *nube gannawá-da*, it is an ambiguity which is certainly not cured, but intensified, by adding the Siṇhalese equivalent for the words "willing to take": and all ambiguity might easily have been prevented simply (1st) by avoiding the wholly unwarranted introduction of the word *kemati-da* (willing,) not found in the English formula, which the translators had no business to play tricks with, and (2nd) by the mere insertion of the little word *den* (now,) or other equivalent for "at this time," which would not have been any tampering with, but an intimate adherence to, the sense of the English "do you take?" *Nube* DEN *páwágannawá-da?* (*i.e.*, "Do you *now* take," &c.,) would have been at once a more accurate and equally what I think is intended by the expression "idiomatical" rendering of the English formula. The present Siṇhalese version of it is admittedly not literal; it is, most undoubtedly, at the very least, excessively ambiguous (and the law loathes ambiguous expressions); and the words by which everyone has concurred in retranslating it into English, namely, the Kurunégala interpreter, the jury, the Maha Mudaliyár, Mr. Guṇasékara, and (least) myself—these English words, "Are you willing to take?" &c., by no possible construction imply, in English meaning, a present taking in marriage, an act then done, but only a willingness to do a thing. And, as already said, being willing or even anxious to do a thing is very different from actually doing it.

6. For these reasons, whatever shade of doubt I may have had before—that doubt being now entirely removed by the authority of the Maha Mudaliyár and Mr. Guṇasèkara, in addition to the authorities by which I was previously influenced—I am now distinctly of opinion that the Siṇhalese version is erroneous, and that marriages celebrated under it are invalid, and that an Act of legislation is necessary to validate them.

7. I may direct attention to both of the Siṇhalese versions of the corresponding words of the marriage ritual in the Church of England Prayer Book, in which a literal translation of it has been given perfectly free from any ambiguity:—

N. yana mama, M. yana mama, mé dawasa paṭang, páwágamini, &c.
I, the person N. you M. from this day take, &c.

And in the Rev. Canon Dias' translation of the Prayer Book:

Mé nam mama adin mathahi, me nam nube.....páwágamini, &c.
I, called M. from this day you the person .....do take, &c.

I have, &c.,
T. BERWICK,
Commissioner of Assize.

No. 7.

The Hon. T. BERWICK, Commissioner of Assize, to Governor Sir J. R. LONGDEN, K.C.M.G.

Colombo, 10th October, 1882.

SIR,—THE telegram which I sent to the Colonial Secretary from Batticaloa, so soon I as learned from the *Times* of the 3rd instant that notice had been given in the Legislative

Council of a question relative to the recent polyandry case at Kurunégala, will have apprised Your Excellency of my intention to supply at the earliest possible time the information which I might assume Government would desire to have upon the subject.

2. The first part of the question as published, is, "Whether the attention of Government has been directed to the trial of a Kandyan for bigamy at the last criminal sessions of the Supreme Court at Kurunégala, and the acquittal of the accused on the ground of an incorrect translation of the marriage formula prescribed by the amended Kandyan Marriage Ordinance, 1870?"

3. The case which, with some inaccuracy of particulars, is thus referred to is the same as that which I had already communicated to your Excellency with a view to remedial legislation, in which a woman was tried on the 17th August last on a charge of polyandry, together with the man with whom she was alleged to have contracted the second marriage, and who was charged with aiding and abetting her in the commission of this offence. The charge was laid against both under the 27th clause of the Ordinance 3 of 1870, which enacts that "any person resident in the Kandyan Provinces, being married, who shall marry any other person during the life of the former husband or wife ....., and every person counselling, aiding, and abetting such offender shall be guilty of an offence, and being convicted thereof shall be liable to be imprisoned with or without hard labour for a period not exceeding three years."

4. Both prisoners were acquitted by the jury. The acquittal, as Your Excellency has been previously informed by me, was contrary to my summing up of the facts, and contrary to my recommendation to the jury to convict both prisoners if they believed the evidence—which there seemed no reason to doubt—of the identity of the prisoners and of a man Sirimalle, the woman's alleged first husband, with the parties who were testified to having signed certain entries in two marriage registers which were produced and read in evidence, and of the knowledge of the prisoners that the said Sirimalle (who was brother of the male prisoner) was alive at the date of the second entry.

5. The *ground* of the acquittal was not, and could not, be exactly an incorrect translation of the Ordinance—an inaccuracy which only transpired incidentally, though that may be properly considered the remote cause of it. In order to the constitution of the contract of marriage the Ordinance requires that the parties shall affirmatively answer certain questions to be put to them by the registrar in certain fixed and prescribed words: namely, "Do you take this man to be your wedded husband?" and "Do you take this woman to be your wedded wife?" and it had been proved that the registrars in neither case had put these questions to the parties, but other questions which, according to their interpretation by the interpreter of the court, and in the opinion of the jurors who were mostly conversant with both Siṇhalese and English, not only differed from the literal rendering of the formula of words prescribed by the Ordinance, but did not have the same meaning, and the assent to which did not, in their opinion, amount to a categorical declaration that the parties actually then took each other for husband and wife, as required by law. And the ground of acquittal was stated by the foreman of the jury to be that, consequently, there had been no marriage, in fact, between the woman and either of the men. This was stated in answer to a question by me when hesitating to record the verdict. With the correctness of that opinion of the jury I am not concerned at this moment when dealing with the first part of the hon. member's question. In the course of the trial it incidently transpired that the same registrars had always used the same, or nearly the same, Siṇhalese formula, and in doing so had substantially followed an incorrect Siṇhalese translation of the Ordinance—incorrect, that is to say, according to the English translation thereof as given by the interpreter, and according to the opinion of the jurors. But though that excused the registrars, it had only a remote and not a direct connection with the case.

6. The next part of the hon. member's question is, "Whether it is true that the learned Commissioner of Assize before whom the case was tried caused it to be proclaimed in court, on the strength of the said mistranslation, that all Kandyan marriages were void, and the issue of such marriages bastards?"

7. Categorically and briefly, I did not cause any proclamation whatever to be made in court, and I never either held or expressed an opinion that all Kandyan marriages are void and their issue bastards.

8. For this remarkable assertion the name of no responsible authority has been given; and I would take the liberty of expressing my opinion that both fairness and propriety demanded that the authority on which such a question was based should have been stated. The question was probably induced by a statement in almost identical words published in a newspaper; and such a publication appears to me only to proclaim a marvellous credulity for sensational, not to say evil reports, and to be, moreover, grossly libellous.

9. Having answered the question and given a categorical contradiction to the story of having caused a public proclamation to be made in court, I am entitled to leave the matter as it is, but I have no intention of leaving any loophole for further cavil. The authors of the story will probably say, or others will say for them, that the words "caused to be proclaimed in court," and "all Kandyan marriages," were used hyperbolically and for the sake of inflation and exaggeration; that their statement was substantially, though not strictly, correct, and that they "meant" so and so. If the words were not used hyperbolically and for the sake of inflation and exaggeration, then the information on which the question is based was false in intention as well as in fact. If they were used only in that sense and for that purpose, then such use proclaims the animus and consequent untrustworthiness, not to say valuelessness, of the information.

10. But to stay all cavil, I will treat them as exaggeration and hyperbole, and assume the point to be simply whether I ever in the course of the trial and in court expressed or announced an opinion that all Kandyan marriages celebrated according to the same Siṇhalese version of the Ordinance are void, and the issue thereof illegitimate.

11. I may say that I did so *inferentially;* for, with reference to the case then before the court, I told the jury (not the people, nor in Siṇhalese), as it became my duty to do, that, in my individual opinion, as then advised, I thought, on the strength of the interpretation by the court interpreter, that the supposed marriage of the female prisoner was invalid; but I recommended them, if they were satisfied on the other facts of the case, to return a verdict which would enable me to reserve the point of the validity of the marriage for the opinion of the Collective Court; and I specially urged them to do so on the ground of the very grave importance of the question involved, because, as I pointed out to them, *if* this particular marriage was invalid, then all the marriages celebrated according to the Siṇhalese version of the Ordinance must also be invalid, and a large portion of the population illegitimate. It was, I may remark, proper, as well as natural and reasonable, and indeed my duty, to point out this to them as a reason, and a most important reason, for their adopting the course I suggested.

12. I did not, however (as the question in Council would seem to infer), direct the jury in point of law that the marriage in question was invalid, although I told them that I strongly inclined to that opinion, still less did I direct them in point of law that all marriages celebrated according to the Siṇhalese version were invalid. On the contrary, I directed them to assume for the purposes of their verdict that it *was* valid, telling them that other judges might possibly take a different view from myself; that the question was, perhaps, not free from doubt; and that I thought it one of too great importance to justify me in taking the responsibility of deciding it upon myself. I told them, further, that they need not be under any apprehension of any injustice to the prisoners by their adopting the course I recommended, as, in case of their bringing in a verdict of guilty, I would either suspend the execution of sentence or would abstain from passing sentence until the opinion was obtained of the Full Court in Colombo on the special case which I would reserve for its consideration and decision.

13. I may add that I was surprised, and not altogether satisfied, with the verdict of acquittal returned, and had some doubts at first whether I should receive it, as the ground of acquittal courteously stated by the foreman in answer to my question seemed to indicate that the jury had not followed the direction of the judge in respect to the law; but, after a few minutes' thought it seemed to me not quite clear that it was a question of law: the *fact* of marriage was a fact for the jury, and if this depended on the meaning of the Siṇhalese words used in the ritual of solemnization, *that* was a question within the province of the jury to decide, and on the whole I thought it better not to interfere with the course of the trial and verdict, and at the earliest convenient time specially reported the case to Your Excellency.

14. I do not now recollect who acted as foreman of the jury on that occasion, but, as nearly two months have elapsed since the trial, I would be rather pleased than otherwise that this letter should be forwarded to him to ascertain whether his memory generally confirms the accuracy of my own recollection of the facts as I have stated them.

15. Since I returned to Colombo—late yesterday—I have found that the Hon. the Acting Queen's Advocate is reported as having said in Council last Wednesday that he "believed it was the case that the learned Commissioner caused the public announcement to be made, *after the acquittal*, referred to by his honorable and learned friend." I presume his belief was based on the same authority that described me as having caused a public proclamation to be made in court "to a Kandyan audience after the jury acquitted the prisoners";* and as I am not unaware of the significance of the words "after the acquittal," I protract this letter to state that the reference can only be to what I stated in my address to the prisoners *after the verdict was recorded*, and that not one word was said by me then as to the validity of all Kandyan marriages, or of any marriage whatever except the woman's own supposed marriages.

16. What I did say to the prisoners and caused to be interpreted to them after the verdict was explained to them and before they were discharged from the dock, was to the effect that they had been acquitted not on account of their innocence in intention, or of any disbelief by the jury of the evidence adduced, but solely through an accident, and because the jury considered that both her intended marriages were legally invalid in consequence of the requirements of the Ordinance not having been accurately followed by the marriage registrars, and I took occasion to tell the prisoners, in the hearing of the people present, that it ought to be thoroughly understood through all the Kandyan districts that the custom of polyandry had been finally abolished by law, and that the authorities would enforce an Ordinance enacted solely for the benefit of the Kandyans themselves and their children, not from any purpose of interfering with their religion or their laws suitable to their condition and habits, but to prevent confusion and uncertainty of paternity and uncertainty of their rights of inheritance. That was the whole and only purport of my address to the prisoners, and not the invalidity of any marriages but their own. I was bound to tell the woman that the jury were of opinion that *both* her marriages were illegal; that she was not the lawful wife of her first husband, not because of her own separation from him according to the old custom, but because the marriage with him had not been celebrated in the way required by the Ordinance; and not the lawful wife of her second husband for the same reason; for, unless I had told her this plainly, the meaning of her acquittal, in spite of all the facts proved against her at the trial, would not have been understood by her and others; and the verdict of acquittal would have had, probably, a bad effect among the Kandyans, and encouraged the continuance of the prevailing polyandrous usages which it is so necessary to discourage by every means persuasive and legislative, and by the action of the courts.

17. If there is any other point in connection with the case on which Your Excellency desires information, I shall be very happy to afford it.

I have, &c.,

T. BERWICK,
Commissioner of Assize.

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* *Ceylon Observer* of 27th September, 1882.

No. 8.

The Hon. the COLONIAL SECRETARY to the Hon. the ACTING QUEEN'S ADVOCATE.

No. 597. Colombo, 12th October, 1882.

SIR,—I AM directed to transmit to you the accompanying papers on the subject of an alleged mistranslation in the Sinhalese version of the Kandyan Marriage Ordinance, No. 3 of 1870, and I am to request you to draw up a case for the opinion of the Judges of the Supreme Court, Mr. Berwick having reported that he would, in the event of a conviction, have reserved the point and brought it before a Full Court for adjudication.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

No. 9.

The Hon. the ACTING QUEEN'S ADVOCATE to the Hon. the COLONIAL SECRETARY.

Queen's Advocate's Office,
No. 522. Colombo, 16th October, 1882.

SIR,—As directed by your letter No. 597 of the 12th instant, I have the honour to forward "case" for the opinion of the judges of the Supreme Court on the subject of an alleged mistranslation in the Sinhalese version of the Kandyan Marriage Ordinance, No. 3 of 1870, attached to which is a paper (D.) containing my views on the question, which would have to be placed before the judges in the absence of any argument in court on the part of the public prosecutor.

The papers that accompanied your letter are herewith returned.

I am, &c.,
CHAS. L. FERDINANDS,
Acting Queen's Advocate.

Enclosure No. 1 in No. 9.

CASE for opinion of the Hon. the Judges of the Supreme Court.

At the last Kurunégala Assize a woman named Opalangu was charged with polyandry, and a man named Menika was, in the same indictment, charged with having counselled her thereto, in breach of the 27th section of the Kandyan Marriage Ordinance, No. 3 of 1870.

At the trial the official registers of both marriages were produced, and the signatures and identity of parties duly proved, as well as the fact of the first husband, Sirimala, being alive, but the prisoners were both acquitted on the ground that in point of fact no valid marriage had ever been solemnized between Opalangu and Sirimala, inasmuch as the words of "present contract" prescribed by the Ordinance had not been used, but other words substituted which are said not to imply an actual marriage.

The formula, as given in the Ordinance, runs thus :—"*Do you* take this woman to be your wedded wife?" The registrar, acting under an authorized translation of the Ordinance generally in use by native registrars, put the question thus :—"*Are you willing* (*kamati-da*) to take this woman," &c.

The learned Commissioner considers this such a serious mistranslation as to vitiate the marriage, notwithstanding the *registration* that *immediately* followed the answer in the affirmative.

The question of mistranslation was referred by the Government to the Maha Mudaliyár L. De Soyza, Chief Translator, and to Mr. Guṇasékara, the Acting Chief Translator. They are both of opinion that there is no mistranslation, inasmuch as the *sense* and meaning of the English question are conveyed by the word "*kamatida*," and that *idiomatically* the translation is correct, although the word does not convey *literally* the meaning of the English "Do you."

The learned Commissioner, although individually of opinion that there was legally no marriage, directed the jury to find the accused guilty, to enable him to reserve the question for the opinion of the Collective Court. The jury, however, chose to decide on the *law* themselves, and acquitted the accused. It has therefore been deemed advisable to solicit the opinion of the judges on the question raised, the perverseness of the jury having prevented a judicial decision by the Collective Court, and the question being one of great urgency.

The questions submitted for consideration are :—

(1) Has there been a mistranslation arising from the English words, "Do you," not having been *literally* rendered ;

(2) If so, does the mistranslation (notwithstanding the registration that followed) affect the validity of marriages solemnized thereunder, and thus call for remedial legislation ?

The Acting Queen's Advocate has submitted to the Government his views in a paper, herewith forwarded for the consideration of the judges.

The following documents are appended :—

A.—Letter of Commissioner the Hon. T. Berwick, dated 26th August, 1882.

B.—Letter of L. De Soyza Maha Mudaliyár, dated 9th September, 1882, attached to which is the opinion of Mr. B. Guṇasékara, Acting Chief Translator.

C.—Letter of Commissioner, dated 4th October, 1882.

D.—Note by the Acting Queen's Advocate on the questions raised.

Colombo, 16th October, 1882.

Enclosure No. 2 in No. 9.

REMARKS by the Acting Queen's Advocate on the Kurunégala bigamy case, referred to by the Commissioner of Assize in his letters of 26th August and 4th October, 1882.

Two questions arise for consideration on the Commissioner's letters—one of fact, and the other of law.

The question of fact may be thus stated :—

"Is there a material mistranslation in the Siṇhalese copy of the Kandyan Marriage Ordinance of the formula to be observed on the solemnization of a marriage?"

"Does the mistranslation, if any, affect the validity of a marriage duly *registered* under the Ordinance?"

Upon the question of fact there is the testimony of two accomplished Siṇhalese scholars—Maha Mudaliyár De Soyza, and Mr. Guṇasékara Acting Chief Translator to the Government, that no mistranslation exists, in that the *sense* of the English "*do you* take?" is correctly rendered by the Siṇhalese word used, *kemati-da* (*are you willing* to take?)

This word, in their opinion, conveys as much "present contract" as the English words "do you," the tense requiring to be determined by the context or the attendant circumstances.

In the case in question the words were addressed by the registrar to parties then present before him, with the intention of getting married *instanter*, and therefore (according to the Maha Mudaliyár) the words could only be understood in the present tense.

In the same way I find that the question, "*Wilt thou* have this woman," &c., in the marriage service in the Common Prayer Book—referring also to a *present* ceremony—is translated by the word "*kemiti-da*," the same word used in the Kandyan Marriage Ordinance.

The learned Commissioner, however, would follow the *literal* translation irrespective of Siṇhalese idiom. This, in my opinion, is not the legitimate way of conveying by translation the *meaning* of one language into another; but to produce a *literal* rendering, the learned Commissioner finds it necessary to introduce the Siṇhalese word "*den*" (now) to complete the sentence, "Do you take," &c. The objection to this is, that the word "*now*," not being in the English formula, it would be a mistranslation of the English to introduce the Siṇhalese "den."

I am inclined to attach more weight to the meaning attached to the Siṇhalese words by the Maha Mudaliyár and Mr. Guṇasékara, than depend for qualification in this respect to the Kurunégala jury, which I find was composed of 5 Europeans, 3 Burghers, 1 Tamil, 4 Siṇhalese. (See Supreme Court Minutes.)

For these reasons, I am of opinion, upon the question of fact, that there has been no *mistranslation*.

2.—*Effect of Registration.*—If this view of the case be correct, it may not be necessary to enter into the question of law as to the effect of *registration*, but I am constrained to do so as registration, apart from defects in solemnization, is, in my opinion, of vital importance to the successful working of the Kandyan Marriage Ordinance, and the validity of a Kandyan marriage depends, in my opinion, upon *registration*, and not solemnization.

A comparison of the first Kandyan Marriage Ordinance, 13 of 1859, with the present Ordinance, 3 of 1870, shows that the definition of a "marriage" is substantially the same in both, and involves nothing more than a Kandyan union.

The clauses which introduce registration are clauses 2 of 13 of 1859, and 11 of 3 of 1870. Clause 2 runs thus: "No future marriage shall be valid unless (1) *registered* in manner and form as is hereinafter provided; *and* (2) *solemnized* in the presence of the registrar of the district," &c. Then follow certain clauses providing for the *solemnization* of the marriage, and others, with schedules C. and F., providing for the *registration* of the marriage. There is to be noticed throughout a distinction drawn between *solemnization* and *registration*, and *both* are made essential by this Ordinance to the validity of a marriage.

Turn now to Ordinance 3 of 1870. Clause 11 runs thus: "Except as is hereafter provided, no marriage contracted since the Ordinance No. 13 of 1859 came into operation, or to be hereafter contracted, shall be valid unless *registered* in manner and form as is hereinafter provided, in the presence of any registrar for the district," &c. The words "*and solemnized*" are here studiously omitted.

Clause 20 (lines 1—14) then provides as before the *solemnization*, and lines 15 to end provide for the *registration* of the marriage, but with this marked difference, that after 3 of 1870 the Legislature did not make the *solemnization* a *sine quâ non* for the validity of a marriage, but was satisfied with registration. The solemnization was to proceed only on "nothing appearing to *hinder the registration*."

This view of the law is further confirmed when we find the Legislature introducing a significant clause (No. 39) in 3 of 1870, which did not exist in 13 of 1859.

This clause enacts: "The entry as aforesaid in the register of marriages and in the register of divorces shall be *the best evidence of the marriage contracted* or dissolved by the parties, *and of the other facts stated therein*." This provision was evidently intended to exclude *oral* evidence (of the nature recorded in the case in question by the learned Commissioner), as to what took place at the solemnization which preceded the registration, and to prevent such appeals (as were made) to memory as required the recollection and repetition of words used years and years ago. One of the "*facts stated*," and made best evidence of is thus recorded in the official register: "*This marriage was entered into between us* (signatures of parties) in the presence of us (signatures of witnesses).

I find also that Sir Hercules Robinson, in his address to the Legislative Council on opening the Session of 1869, thus alluded to the amendments, then proposed, of the Kandyan Marriage Ordinance of 1859:—

"Meanwhile it will be a great step in advance, and quite as far as the Kandyans are at present prepared to go, if, having extinguished polygamy, we can only *secure such a formal record* of the formation and dissolution of matrimonial connections, as will do away with a fruitful source of uncertainty and litigation as to the rights of inheritance, arising from the difficulty of tracing and proving in our courts after a lapse of years, by oral evidence alone, the complications of Kandyan alliances."

In my opinion, the admission of oral evidence at the trial in question, in proof or disproof of the ceremony there used, was irregular in that such evidence was not "the best evidence" prescribed by the Ordinance, and, consequently, that it was a misdirection on the part of the learned Commissioner to the jury to advise them to recognize or act on such evidence, in the face of the signed and recorded evidence to the contrary in the register. It will be thus seen that the defect (if defect it be) on which the Commissioner of Assize relied, having taken place in the *solemnization* and not in the *registration* of the marriage, is not a fatal defect or one calling for remedial legislation.

Remedial legislation, based on a defect in the *solemnization* alone, would, in my opinion, have a mischievous tendency. By opening the door to *oral* evidence, it must inevitably impair the efficacy of *registration*, and introduce "the fruitful source of uncertainty and litigation," which, according to Sir Hercules Robinson, it was intended to provide against by a "*formal record*" of the marriage.

Queen's Advocate's Office,
Colombo, 12th October, 1882.

CHAS. L. FERDINANDS,
Acting Queen's Advocate.

No. 10.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Hon. the JUDGES of the Supreme Court.

Colombo, 21st October, 1882.

HON. SIRS,—I HAVE the honour to forward for your consideration the enclosed copy of a letter from the Queen's Advocate, and the papers therein mentioned. They refer to a point raised by Mr. Commissioner-of-Assize Berwick in a trial held before him at the recent sessions of the Supreme Court at Kurunégala; and it will be seen that Mr. Berwick is of opinion that an alleged marriage was invalid by reason of the officiating registrar having used a certain form of words in Siṇhalese while solemnizing the marriage in question instead of certain other Siṇhalese words which he considers to be essential to the validity of a marriage under the Kandyan Marriage Ordinance.

Mr. Berwick is further of opinion that all marriages solemnized with the same Siṇhalese words are invalid, and the offspring thereof illegitimate.

The Government, on the other hand, has been advised that the Commissioner of Assize is mistaken as to his view that the form of words used is incorrect, and further, that even if the form were incorrect, a marriage duly contracted and duly solemnized in other respects and duly registered would not, by reason of such incorrectness, be invalid.

Under these circumstances the Government is placed in the difficult alternative of, on the one hand, allowing the dictum of a Commissioner (who was conducting a session of the Supreme Court)—which dictum, if upheld, must injuriously affect the civil rights of a large portion of the population of the Island—to pass without authoritative contradiction; or, on the other, of passing an amending Ordinance which may in reality be quite uncalled for, and which would, as is pointed out by the Acting Queen's Advocate, have a mischievous tendency, as, by opening the door to oral evidence, it would impair the efficacy of registration and introduce an element of uncertainty into the Kandyan marriage system which it is most desirable to avoid.

In this difficulty, I shall be much obliged if you would favour me with your advice whether or not you attach so much weight to the views held by Mr. Commissioner Berwick as to consider remedial legislation to be advisable, in order that, in the former event, I may take steps to have an amending Ordinance passed with the least possible delay, or, in the latter, may be enabled with greater authority to remove the impression created by his dicta.

I am aware that the step I am taking in soliciting your valuable opinion may be somewhat unusual, but I think you will agree with me that it is justified by the urgency and importance of the case; and I have the less hesitation in taking it, because Mr. Commissioner Berwick was himself anxious to have had the points in question adjudicated by a Collective Court, a remedy which is, unfortunately, no longer available.

I have, &c.,
J. R. LONGDEN.

No. 11.

The Hon. the JUDGES of the Supreme Court to Governor Sir J. R. LONGDEN, K.C.M.G.

Colombo, 14th November, 1882.

HON. SIR,—WITH reference to Your Excellency's letter of the 21st ultimo, referring to us the accompanying letter from the Hon. the Queen's Advocate, and the papers therein mentioned, we have the honour to send herewith our opinions on the point of the validity of the marriages solemnized under the Kandyan Marriage Ordinance, to which exception was taken by Mr. Commissioner Berwick at the last Kurunégala Criminal Sessions of the Supreme Court.

We have, &c.,

J. P. DE WET, Acting Chief Justice.
L. B. CLARENCE, Senior Puisne Justice.
H. DIAS, Junior Puisne Justice.

Enclosure No. 1 in No. 11.

OPINION of the Acting Chief Justice.

THE law affecting all marriages is "*Consensus non concubitus facit matrimonium.*"

In this case, upon the day mutually agreed upon, the man and woman (candidates for marriage) appear before the registrar—

(*a*) Of their own free will; and
(*b*) With one common object; that common object being, not to arrange about a marriage *de futuro*, but to be *there and then* joined together as husband and wife.

Being fully impressed with the object of presenting themselves, certain questions are put to the man and woman respectively, the full purport and significance of these questions being the willingness of the parties to be then and there united in matrimony. The questions are, indeed, very simple, and can convey but one impression upon the minds of those to whom they are put. The question being put, "Are you willing to marry," *i. e.*, now, at the present time, and the reply being in the affirmative, the "nexus" is complete.

The marriage having being duly celebrated, the same is registered in a book kept for that purpose, the production of which, showing the entry of marriage, will be sufficient proof at any time thereafter in any suit whether civil or criminal to show the time when the marriage took place, and the parties to that marriage.

J. P. DE WET,
Acting Chief Justice.

Kandy, 30th October, 1882.

Enclosure No. 2 in No. 11.

OPINION of the Senior Puisne Justice.

THE letter of His Excellency the Governor, dated the 21st ultimo, and the accompanying papers, reached my hands on the 10th instant, and in replying to His Excellency's question, I do so with the advantage of having seen the opinions of the Acting Chief Justice and my brother Dias.

I have scarcely any knowledge of the Siṇhalese language, and with regard to the precise value of the Siṇhalese words which appear to have been used by the registrar of marriages on the occasion in question, as the Siṇhalese equivalent of the English words: "Do you take," &c., I rest entirely upon the opinions of my brother Dias, and Messrs. Soysa and Guṇasékara, which command my confidence, and are, I doubt not, correct.

With this assistance I have no hesitation in stating that, in my opinion, there has been no mistranslation operating so as to prevent the proceedings conducted by the registrar from effecting a valid marriage between the man and woman in question. The words used by the registrar appear to amount to a sufficient idiomatic rendering in Siṇhalese of the questions required by the Ordinance to be put. Certainly, in English the future tense is continually employed by parties whose intention is to effect a contract *in præsenti*. Nothing is more common than for one party to say to the other, after a discussion as to terms: "Will you take the goods?" and if the other party replies, "Yes, I will," or words to the same effect it is understood that a bargain has been concluded. In the Church of England Marriage Service the future tense is used—"Wilt thou take?"—with the intention of creating a marriage contract *in præsenti*. I am satisfied that the question which the Legislature has required to be put was substantially and sufficiently put in the Siṇhalese language, in terms which admitted of no doubt whatever as to its object. The essence of the matter in such cases is, as it was put by that very eminent authority, Vice-Chancellor Sir W. P. Wood (afterwards Lord Hatherley), that the consent of the man and the woman should be given in a solemn manner.* I see no reason whatever to think that the question put in Siṇhalese by the registrar was insufficient for the purpose.

Being thus of opinion that the form followed by the registrar is a sufficient compliance with the requirements of the Ordinance, I find no necessity for any remedial Ordinance.

L. B. CLARENCE,
Senior Puisne Justice.

13th November, 1882.

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*Harrod v. Harrod, 1 K. & J., 15.

Enclosure No. 3 in No. 11.

OPINION of the Junior Puisne Justice.

THE first question proposed for our consideration is, whether or not the Siṇhalese translation of the English words, "Do you take this woman to be your wedded wife," and *vice versâ*, which occur in the 20th clause of the Ordinance No. 3 of 1870, is correct?

The Siṇhalese version is this:—"Mé stri numbe báriyáwa men páwáganta numba kematida?" The English of this is, "*Will* you take this woman to be your wedded wife?" In the Siṇhalese version the word "will" is substituted for the English word "do." The English words "do you," &c., literally translated into Siṇhalese, stand thus:—"Mé stri numbe báriyáwa men numba páwáganna-wada?" but both forms of the Siṇhalese translation, that is, the literal as well as the existing translation, import as much a future as a present contract, and, as the Maha Mudaliyár correctly observes, the tense must be determined by the occasion and the attendant circumstances, one of those circumstances being the manual act of taking each other by the hand. I don't believe that the English words can be translated into good Siṇhalese so as to convey the idea of a present contract only, except by making the bride and the bridegroom speak in the first person, thus:—"A. B. yana mama C. D. yana umbawa magé báriyáwa meṇ (or koṭa) páwáganimi." The introduction of the Siṇhalese word "deṇ" (now) is not only a departure from the original English, but in Siṇhalese amounts to a repetition of the present tense, which is already indicated by the verb.

When a man and a woman (not married) go before the registrar for the purpose of getting married, and when they are asked by the registrar, in the words of the Siṇhalese translation, whether they are willing to marry each other, and they, taking each other by the hand, give an affirmative answer, and then and there sign the register, there can be but one opinion as to the meaning conveyed by the proceeding to the mind of a Siṇhalese man or woman of average intelligence.

In one of the marriages the registrar says that he did not cause the man to take the woman by the hand. If he omitted this formality, he is liable to punishment under the 29th clause, but the omission does not invalidate the marriage.

On the first question, therefore, I am of opinion that there is no mistranslation arising from the English words "do you" not having been literally translated.

The next question proposed for our consideration is that, assuming that the form of words used in the 20th clause is mistranslated, whether such mistranslation affects the validity of marriages which have been registered under the Ordinance?

The determination of this question depends upon whether the formula prescribed in the 20th clause is or is not an essential ingredient in the contract of marriage.

When two persons who are not within the prohibited degrees, and who are not otherwise disqualified to enter into a contract of marriage, mutually agree to marry each other, and go before the registrar and express their wish to be so married, they are entitled to have the contract of marriage registered after the preliminaries prescribed by the Ordinance (see clauses 15, 16, 17 and 18) have been gone through.

In marriage contracts, as in all other contracts, the mutual consent of the parties is the foundation, and a contract of marriage entered into and duly registered under the above circumstances cannot, in my opinion, be impeached, except on the ground that the consent was obtained by fraud or force; as, according to a well-known rule of law, consent obtained by fraud or force is dissent. In such a case the free consent of the parties, or any of them being absent, the registration, which is the only evidence of the marriage, is void, otherwise it is good and effectual, and cannot be avoided on the ground of the absence of any mere formalities which are not of the essence of the contract.

The object of the Ordinance seems to me to be to exclude evidence of this character, and in support of this view I may refer to the proviso to the 13th clause, which, on a matter of such vital importance as consent, excludes all evidence to disprove such consent where the marriage has been already contracted—that is, duly registered. What Mr. Berwick did was to go behind the register and enquire into matter of a ceremonial character which preceded the registration. This, in my opinion, was wrong, as it was calculated to defeat the very object and policy of the Ordinance, which is to make the register the only evidence of the contract of marriage.

The 39th clause was evidently intended to further the same object, but the effect of that clause has been entirely defeated by the use of the word "best" instead of the word "only," which latter is evidently the word which was intended, as will appear on reference to the 11th clause, which provides that a marriage not duly registered shall be invalid—which means, that registration is indispensable to the validity of a marriage. According to this, a marriage can only be proved by the production of the register. The technical meaning of the words "best evidence" is "primary evidence," which pre-supposes the possible existence of secondary evidence, and, according to the law of evidence, such secondary evidence would be admissible when the absence of the primary evidence is sufficiently accounted for. I don't believe the Legislature used the words in the sense of primary evidence, as it is opposed to the provision in the 11th clause, and is against the manifest policy of the Ordinance, which, as I have already observed, is to make one definite thing—namely, registration—the only evidence of the contract of marriage.

On the second question, I am of opinion that the alleged mistranslation does not invalidate marriages otherwise duly contracted and registered under the Ordinance, and that there is no necessity for any legislation on the matter.

H. DIAS,
Junior Puisne Justice.

8th November, 1882.

No. 12.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Hons. the JUDGES of the Supreme Court.

Colombo, 18th November, 1882.

HON. SIRS,—I HAVE the honour to acknowledge the receipt of your letter of the 14th instant forwarding your opinions on the point of the validity of the marriages solemnized under the Kandyan Marriage Ordinance, to which exception was taken by Mr. Commissioner Berwick at the last Kurunégala Criminal Sessions of the Supreme Court, and I have to thank you for complying with the request of the Government to give your opinion on this most important case.

For the sake of quieting the apprehensions that have been excited, the whole of the papers on the subject will be printed and laid before the Legislative Council as a Sessional Paper.

I am, &c.,
J. R. LONGDEN.

No. 13.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Hon. T. BERWICK, Commissioner of Assize.

Colombo, 20th November, 1882.

SIR,—I AM directed to inform you that having, with the advice of the Executive Council, considered the very important letters addressed by you as Commissioner of Assize to the Governor on the 26th of August and 4th of October last, His Excellency deemed it proper to follow as nearly as possible the course laid down by law for dealing with questions of law where such questions are reserved by the presiding judge on a criminal trial, which course you reported that you would have taken if the prisoner had been found guilty. He accordingly laid the whole case before the Judges of the Supreme Court, and they have favoured him with their opinions. The Government will be guided by the decision of the judges, who are unanimous in considering that the marriage in question was a legal marriage, and that no alteration is required in the Kandyan Marriage Ordinance.

I am, &c.,
J. A. SWETTENHAM,
for Colonial Secretary.

XXXIV.—1882.

CEYLON.

FINANCIAL STATEMENTS

LAID BEFORE THE LEGISLATIVE COUNCIL

DURING THE SESSION OF 1882.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

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STATEMENT of the REVENUE and EXPENDITURE

REVENUE.

	Rs	cts.	Rs	cts.	£	s.	d.
ARREARS OF REVENUE OF FORMER YEARS	—		438948	20¾	41151	7	11
CUSTOMS.							
Imports	2867332	30					
Royalty on Plumbago	64302	71					
Warehouse Rent	7804	80					
			2939139	81	275572	9	7
PORT AND HARBOUR DUES.							
Port Clearances	104499	80					
Boats and Moorings	11973	50					
Pilotage	27834	75					
			117308	5	13810	2	7
LAND SALES.							
Waste Lands	—		408703	59½	38315	19	3
LAND REVENUE.							
Paddy	732763	76					
Fine Grain	61996	46½					
Gardens	11046	34					
Tythes redeemed	3588	47					
Rent of Lands	13923	31					
Royalty on Cabook, &c.	168	40					
Licenses on Plumbago	1642	99					
Cinnamon	16	0					
Sundries	72	40					
			825218	16½	77364	4	9
RENTS, EXCLUSIVE OF LANDS.							
Bridges, Canals, &c.	341894	66					
Government Buildings and Houses	37708	9					
			379602	75	35587	15	2
LICENSES.							
Arrack, Rum, and Toddy	1517502	44					
Stills	7360	0					
Wholesale Dealers in Arrack and Rum	790	0					
Opium	3300	0					
Chanks	4080	15					
Royalty on Elephants	100	0					
			1563432	59	146571	16	
STAMPS.							
General	795489	66					
Composition Duty	51573	83					
			847063	49	79412	1	1
TAXES	—		27861	78	2612	0	10
POSTAGE.							
Postage Stamps	227615	20					
On Letters, etc.	20727	50					
			248342	70	23282	2	7
FINES AND FORFEITURES.							
Supreme, District, and Police Courts	49981	93½					
Government Agents	333	62					
Other Departments	1658	14					
			51973	69½	4872	10	8
GOVERNMENT VESSELS	—		37036	6	3472	2	7
Carried forward	--		7914930	89¼	742024	15	5

of the COLONY of CEYLON for the Year 1881.

EXPENDITURE.

	Salaries. Fixed. Rs	cts	Salaries. Provincial. Rs	cts.	Allowances. Rs	cts.	Contingencies. Rs	cts.	Total. Rs	cts.
Civil Establishments.										
His Excellency the Governor	80245	89	15293	57	—		155	81	95995	27
Secretariat	118369	68	30712	40	—		34799	62	183911	70
Treasury	30050	0	3130	0	962	50	680	9	35122	59
Audit Office	36450	0	17613	0	—		2849	54	56912	54
PROVINCIAL AGENCIES.										
Western Province	87073	61	53170	45	180	0	3510	92	143934	98
North-Western Province	56524	13	19689	60	360	0	1388	72½	77962	45½
Southern do.	77548	91	29401	27	420	0	2152	33	109522	51
Eastern do.	49603	37	13407	30			719	72	64760	39
Northern do.	71036	42	33149	70	600	0	2170	70	106956	82
Central do.	92667	28	45760	73	—		2139	89	140567	90
North-Central do.	16'00	49	26913	55	—		593	24	45637	28
Public Works Department	170070	90	140592	46	1140	0	3366	5	315169	41
Survey Department	66499	11	190652	41	1156	25	-		258607	77
CUSTOMS DEPARTMENT.										
Western and North-Western Provinces	60044	78	26682	78	500	0	5268	65	92496	21
Southern Province	17513	34	4226	96			1358	63	23098	93
Eastern do.	6389	99	917	67			366	77	7671	43
Northern do.	18510	0	2711	58	—		2501	84	23726	42
HARBOUR DEPARTMENT.										
Master Attendant, Colombo	7074	99	12093	66	663	91	185	18	20017	74
Do. Galle	5490	0	11110	0	—		600	95	17200	95
Do. Trincomalee	216	67	6087	50	- -		251	59	6555	76
Do. Batticaloa			480	0	-				480	0
POST OFFICE	46461	91	78102	71	1380	0	—		125944	62
DIRECTOR, ROYAL BOTANIC GARDENS	7579	92	12418	67	—		2957	9	22955	68
DIRECTOR, COLOMBO MUSEUM	—		14153	16			5722	15	19875	31
AGENT, COLONIAL STEAMER	—		20210	30	2772	90			22983	20
Judicial Establishments.										
Supreme Court, Chief Justice	27699	96	—		-		—		27699	96
Do. Senior and Junior Justices	39600	0			—		-		39600	0
Registry of the Supreme Court	21898	0	900	0			322	6	23120	6
Queen's Advocate and Deputies	47106	3	12788	50	—		428	44	60022	97
DISTRICT COURTS.										
WESTERN PROVINCE.										
Colombo	21099	98	3799	93	—		258	50	25158	41
Kalutara	13029	38	2786	40			191	92	16007	70
Kégalla	8490	0	2799	99	-		77	87	11367	86
Negombo	10139	64	2539	80	-		75	0	12754	44
Ratnapura	9830	0	2593	72	-		88	72	12512	41
NORTH-WESTERN PROVINCE.										
Chilaw	11081	83	2218	71			83	92	13387	46
Kurunégala	12961	86	3183	37	—		72	61	16217	87
SOUTHERN PROVINCE.										
Galle	19140	0	3620	0			162	81	22922	81
Mátara	10243	79	2166	27			121	1	12531	7
Tangalla	3010	0	200	0	—		147	93	3387	93
EASTERN PROVINCE.										
Batticaloa	11740	0	2750	4	-		189	26	14679	30
Trincomalee	3315	0	115	0	—		24	0	3484	0
NORTHERN PROVINCE.										
Jaffna	14460	0	2570	0	- -		136	18	17166	18
Mannár	1850	0	500	0	—		48	75	2398	75
Mullaittivu	1666	25	209	60			114	7	1989	92
Vavúniya-Viláṇkulam	—		1000	0	- -		2	0	1002	0
CENTRAL PROVINCE.										
Badulla	10852	11	1111	16	—		98	80	12362	7
Kandy	20350	0	4500	0	—		148	74	24998	74
NORTH-CENTRAL PROVINCE.										
Anurádhapura	2710	0	350	0	-		41	50	3131	50
ITINERATING DISTRICT JUDGE	—		4799	77	—		—		4799	77
Carried forward	1444158	22	866873	69	10435	56	76906	60½	2398374	7½

REVENUE—*continued.*

	Rs cts.	Rs cts.	£ s. d
Brought forward	—	7914930 89¼	742024 15 5
SALE OF GOVERNMENT PROPERTY.			
Salt	851004 57		
Arrack and Rum	5456 0		
Colonial Stores	216950 86		
Timber	222115 96½		
Weights and Measures	99 76		
Unserviceable Tools	6619 75		
Produce of Botanical Gardens	8360 83		
Crops growing on Crown Lands	1253 81		
Sale of Delft horses	507 0		
Sundries	6329 4	1318727 58½	123670 14 3
REIMBURSEMENTS.			
Hospital Stoppages	4677 4		
Government Gazette, &c.	8031 27		
School Fees, &c.	21909 16		
School Books, Stationery, &c	5965 66		
Irrigation Works	16503 0½		
Survey Fees	63994 91		
Maintenance of Prisoners in Jails	3972 56		
Value of Tools lost	7638 64		
Value of Prison Labour	17986 74		
Refund of Civil Hospital expenses	11273 1		
Passage Money of Immigrant Coolies	12762 0		
Collections at Cemeteries	3400 47		
Storage of Gunpowder	2937 38		
Assessment Tax	922 93		
Cost of Police recovered from Municipalities	126778 41		
Sundries	28698 4	337451 22½	31636 1 0
ELECTRIC TELEGRAPH	—	54810 48	5138 9 7
MISCELLANEOUS RECEIPTS.			
Payment on account of deficiency of Troops	98041 67		
Overpayments recovered	264840 77		
Contribution to Widows' Pension Fund	1551 83		
Pioneer Pension Contributions	7230 40		
Unclaimed Deposits	23856 49		
Sundries	26817 86	422339 2½	39594 5 9
INTEREST.			
On Loan Board Funds	24621 79		
On Arrears of Revenue	26159 86		
On Investments	97718 42	148800 7	13950 0 1
PEARL FISHERY.			
Proceeds of	—	599533 0	56206 4 4
SPECIAL RECEIPTS.			
Fees for Title Deeds	9804 54		
Sundries	4 49	9809 3	919 12 0
RAILWAY RECEIPTS	—	2880090 67	270008 10 0
Carried forward	—	13686491 97¾	1288108 12 5

EXPENDITURE—*continued.*

	Salaries. Fixed. Rs.	cts.	Salaries. Provisional. Rs.	cts.	Allowances. Rs.	cts.	Contingencies. Rs.	cts.	Total. Rs.	cts.
Brought forward .	1444158	22	866873	69	10435	56	76906	60½	2398374	07½
COURTS OF REQUESTS AND POLICE COURTS.										
WESTERN PROVINCE.										
Avisawella and Pasyala . .	6240	0	2140	0	—		440	75	8820	75
Colombo Police Court . .	10450	0	2150	0	—		369	43	12969	43
Do. Court of Requests .	10850	0	2060	0	—		48	25	12958	25
Kalutara . . .	—		7207	38	—		136	25	7343	63
Panadure . . .	6340	0	460	0	—		79	3	6879	3
Rakwana . . .	—		713	33	—		29	51	742	84
NORTH-WESTERN PROVINCE.										
Kalpitiya . . .	6408	33	100	1	—		50	0	6558	34
Kurunegala . . .	—		2340	0	—		74	34	2414	34
Puttalam . . .	2340	0	476	25	—		100	0	2916	25
SOUTHERN PROVINCE.										
Balapitimodara . . .	6459	89	575	0	—		60	50	7095	39
Galle	9862	58	2603	4	—		176	25	12641	87
Hambantota . . .	1763	30	177	36	—		8	0	1948	66
Matara . . .	5131	29	7400	0	—		185	97	12717	26
EASTERN PROVINCE.										
Batticaloa . . .	—		940	0	—		—		940	0
NORTHERN PROVINCE.										
Chavakachcheri . . .	1620	0	370	0	—		233	12	2223	12
Jaffna	6520	0	1130	0	—		192	72	7842	72
Kayts	5570	0	1320	0	—		91	50	6981	50
Mallakam . . .	—		870	0	—		167	50	1037	50
Point Pedro . . .	5620	0	270	0	—		119	37	6009	37
CENTRAL PROVINCE.										
Dimbula and Dikoya . .	—		3079	92	—		272	38	3352	30
Galagedara . . .	6560	0	1380	0	—		30	0	7970	0
Gampola and Pussellawa . .	6402	50	1275	83	—		80	14	7758	47
Haldummulla . . .	7853	32	991	48	—		3	0	8847	80
Kandy	11000	0	1620	0	—		130	59	12750	59
Matale and Dambulla . .	6284	44	320	0	—		110	34	6714	78
Nawalapitiya . . .	—		6100	0	—		—		6100	0
Nuwara Eliya and Maturata .	1200	0	1410	0	—		45	0	2655	0
Panwila and Urugala . .	6840	0	1094	45	—		76	38	8010	83
REGISTRATION DEPARTMENT	66924	13	15247	49	37686	50	7150	45	127008	57
FISCALS.										
Western Province . .	27809	72	10965	59	1110	0	1156	17	41041	48
North-Western Province . .	6123	36	5167	65	240	0	74	93	11605	94
Southern Province . .	11380	0	7490	0	—		792	44	19662	44
Eastern Province . .	4527	86	930	0	—		52	23	5510	9
Northern Province . .	10336	11	4910	0	—		458	34	15704	45
Central Province . .	18182	0	11180	21	—		241	97	29604	18
North-Central Province . .	908	31	710	0	—		133	29	1751	60
LOAN BOARD . . .	5300	0	—		360	0	68	95	5728	95
ECCLESIASTICAL ESTABLISHMENTS	86566	50	2315	0	10870	0	—		99751	50
PUBLIC INSTRUCTION . .	37749	84	192772	46	—		—		230521	80
MEDICAL DEPARTMENT .	84463	64	128806	56	16023	77	5219	29	234513	26
POLICE DEPARTMENT . .	23594	16	470321	29	2800	0	—		496715	45
PRISONS DEPARTMENT .	10643	18	3993	34	—		—		14636	52
CONVICT ESTABLISHMENTS .	12037	39	42933	86	—		—		54971	25
COLONIAL STORE . .	25627	43	3245	77	—		—		28873	20
CEYLON GOVT. RAILWAY .	—		512924	2	2133	32	—		515057	34
CROWN AGENTS . .	—		4266	64	1332	99	—		5599	63
Rs.	2007647	0	2335627	62	82992	14	95564	98½	4521831	74½
£	188216	18 0	218965	1 11	7780	10 3	8959	4 4	423921	14 6

REVENUE—*continued.*

	Rs	cts.	£	s.	d.
Brought forward	13686491	97¾	1283108	12	5
Carried forward	13686491	97¾	1283108	12	5

EXPENDITURE—*continued.*

Services, exclusive of Establishments.	Rs.	cts.	Rs.	cts.	£	s.	d.
Brought forward	—		4521831	74½	423921	14	6
PENSIONS AND RETIRED ALLOWANCES.							
Paid in the Colony	176761	70					
Do. England	293803	10					
Do. India	36134	87					
			506699	67	47503	1	10½
REVENUE SERVICES.							
Salt	267281	86					
Grain	41062	84					
Arrack	7	50					
Pearl Fishery	84899	18					
Timber	117842	20					
Assessment	17743	75					
Botanic Gardens	13290	91					
Law Expenses	5823	66					
Commission on Stamps	184	57					
Do. on collection of Hospital Bills	233	58					
Land Sales	99779	1					
Water rates	18	89					
Licenses	2248	31					
Tolls	133	86					
Delft horses	166	56					
			650716	68	61004	13	9½
ADMINISTRATION OF JUSTICE.							
Agents of Provinces	50015	78					
Registrar, Supreme Court	33431	2					
Queen's Advocate	4204	30					
District and Police Courts	22896	36½					
Fiscals	105441	98					
			215989	44½	20249	0	2
ECCLESIASTICAL	—		3000	0	281	5	0
CHARITABLE ALLOWANCES.							
Agent, Western Province	16363	71					
North-Western Province	2015	94					
Southern do.	12052	0					
Eastern do.	4778	91½					
Northern do.	7148	34					
Central do.	4763	50					
			47122	40½	4417	14	6
EDUCATION	—		273779	0	25666	15	8
HOSPITALS AND SANITATION.							
Agent, Western Province	3445	50					
North-Western Province	226	99					
Southern do.	3157	5					
Eastern do.	61	59					
Northern do.	8462	19					
Central do.	2094	60					
North-Central do.	443	23					
Principal Civil Medical Officer	286787	55					
Inspector-General of Police	11835	2					
			316513	72	29673	3	3
POLICE SERVICES.							
Inspector-General of Police	—		163017	49	15282	17	10
PRISON SERVICES.							
Agent, Western Province	35986	29					
North Western Province	18179	49					
Southern do.	40744	32					
Eastern do.	4408	24					
Northern do.	9107	30					
Central do.	58995	41					
North-Central do.	3319	46					
Superintendent of Convict Establishments	159066	90					
Inspector-General of Prisons	4030	0					
Government of Straits Settlements	315	82					
Government of India	6620	37					
			340803	60	31950	6	9
RENT.							
Agents of Provinces	560	0					
Surveyor-General	1110	0					
Registrar-General	1732	50					
			3402	50	318	19	8
TRANSPORT.							
His Excellency the Governor	5964	35					
Secretariat	2437	20					
Treasury	23210	16					
Audit Office	826	1					
Agent, Western Province	9144	98					
North-Western Province	6177	40½					
Southern do.	7250	56					
Eastern do.	4240	67					
Northern do.	5346	56					
Central do.	6695	28					
North-Central do.	6007	10					
Carried forward	77300	27½	7042876	25½	660269	13	0

REVENUE—*continued.*

	Rs.	cts.	£	s.	d.
Brought forward .	13686491	97¾	1283108	12	5
TOTAL . . Rs	13686491	97¾	£1283108	12	5

CEYLON GOVERNMENT RAILWAY.

REVENUE, 1881.—Rs. 2,880,090·67.

	Rs.	cts.	£	s.	d.
Main Line	2084728	41	195443	5	9¼
Náwalapitiya Line ...	296150	55	27764	2	3
Kalutara Line	273494	33	25639	3	1
Breakwater Line ...	89717	0	8410	19	5
Mátalé Line	126808	88	11888	6	7¾
Wharf Line	9201	50	862	12	10
Rs.	2880090	67	270008	10	0

EXPENDITURE, 1881.—Rs. 1,361,052·88.

	Rs.	cts.	£	s.	d.
Main Line	746195	77	69955	17	1
Náwalapitiya Line ...	216264	15	20274	15	3
Kalutara Line	209565	75	19646	15	9
Breakwater Line	43527	15	4080	13	5
Mátalé Line	137527	63	12893	4	4
Wharf Line	7972	43	747	8	4
Rs.	1361052	88	127598	14	2

EXPENDITURE—*continued.*

Services, exclusive of Establishments—*continued.*	Rs.	cts.	Rs	cts.	£	s.	d.
					Total.		
Brought forward	77300	27½	7042876	25½	660269	13	0
TRANSPORT—*contd.*							
Survey Department	15351	83					
Customs Department	431	66					
Director, Botanic Gardens	3118	35					
Do. Colombo Museum	2136	80					
Registrar-General	2117	75					
			100456	66½	9417	16	3
CONVEYANCE OF MAILS	—		251109	42	23541	10	2
WORKS AND BUILDINGS.							
New Works and Buildings	46687	28					
Alterations and Additions	4092	80					
Repairs	84561	97					
			135342	5	12688	6	4
ROADS, STREETS, AND BRIDGES.							
New Roads, &c.	121193	52					
Repairs	1260843	43					
Irrigation Works	109978	11					
Departmental Charges	158871	99					
			1650890	5	151770	18	10
MISCELLANEOUS.							
Treasurer	194679	87					
Agent, Western Province	2702	95					
„ North-Western Province	1148	50					
„ Southern do.	529	56					
„ Eastern do.	1754	21					
„ Northern do.	5856	31					
„ Central do.	14864	68					
„ North-Central do.	5351	37					
Surveyor-General	401	70					
Master Attendant	10841	14					
Botanic Gardens	2189	86					
Crown Agents	15214	35					
Government and Agents in India	1439	67					
			256977	17	24091	12	2
INTEREST.							
On Dutch Kredit Brieven	2007	26					
On Breakwater Loan	184734	0					
			186741	26	17506	19	10
REDEMPTION OF KREDIT BRIEVEN	—		1982	40	185	17	0
COLONIAL STORE	—		187303	68	17559	14	5
CONTRIBUTION TOWARDS MILITARY EXPENDITURE.							
Regular Troops	1239999	96					
Volunteer Corps	36316	91					
			1276316	87	119654	14	2
GOVERNMENT VESSELS	—		166001	42	15562	12	8
REFUND OF DUTIES, DRAWBACKS, &c.	—		47013	96	4407	11	2
LANDS TAKEN FOR GOVERNMENT PURPOSES	—		1966	25	184	6	9
IMMIGRATION	—		104254	33	9773	16	10
RAILWAY SERVICES.							
Interest and Sinking Fund, Main Line	697296	0					
Interest, Matale Railway	132337	10					
„ Nanu-oya Railway	201520	90					
Maintenance and Working Expenses	845995	54					
			1880149	51	176264	0	5
TELEGRAPH SERVICES			198128	0	18574	10	0
EXCHANGE	-		45719	71	4289	0	9
TOTAL . Rs.			13535259	6	1268743	0	9
Excess of Revenue over Expenditure.			153232	91¾	14365	11	8
Rs.			13886491	97¾	£1283108	12	5

EXPENDITURE on Unexpended Balances of previous years brought forward in 1881.	Rs.	cts.	£	s.	d.
Works and Buildings ...	11,653	22			
Roads, Streets, and Bridges ...	43,987	71			
	55,640	93	5,216	6	9

EXPENDITURE under the Surplus Funds Ordinance, No. 13 of 1879.	Rs.	cts.	£	s.	d.
Railway Works... ...	283,999	50			
Telegraph Works ...	105,909	47			
Roads	40	50			
	389,949	47	36,553	19	4

Audit Office,
Colombo, 27th June, 1882.

W. H. RAVENSCROFT,
Auditor-General and Controller of Revenue.

COMPARATIVE STATEMENT OF THE REVENUE OF THE COLONY FOR THE YEARS 1880 AND 1881.

	Revenue of 1880.		Revenue of 1881.		Increase.		Decrease.	
	Rs.	cts.	Rs.	cts.	Rs	cts.	Rs.	cts.
1.—ARREARS OF REVENUE of former years - - -	490482	8½	438948	20¾	—		51533	87¾
2.—CUSTOMS.								
Imports, &c. - - -	2928058	41	2875137	10	—		52921	31
Royalty on Plumbago - -	51322	83	64302	71	12979	88	—	
3.—PORT AND HARBOUR DUES.								
Port Clearances - - -	98872	84	104499	80	5626	96	—	
Boats and Moorings - -	1456	75	14973	50	13516	75	—	
Pilotage - - -	30775	0	27834	75	—		2940	25
4.—LAND SALES.								
Waste Lands - -	508214	87	408703	59½	—		99511	27½
Cinnamon Gardens - -	—		—		—		—	
5.—LAND REVENUE.								
Paddy - - -	774561	77	732763	76	—		41798	1
Fine Grain - - -	82221	4	61996	46½	—		20224	57½
Gardens - - -	13295	59	11046	34	—		2249	25
Tythes redeemed - -	3737	12	3588	47	—		148	65
Rent of Lands - -	9896	85½	13923	34	4026	48½	—	
Royalty on Cabook - -	414	15	168	40	—		245	75
Licenses on Plumbago - -	2116	22	1642	99	—		473	23
Cinnamon - - -	264	25	16	0	—		248	25
Sundries - - -	383	48	72	40	—		311	8
6.—RENTS, EXCLUSIVE OF LANDS.								
Bridges, Canals, &c. - -	346273	38	341894	66	—		4378	72
Government Buildings and Houses -	42717	66	37708	9	—		5009	57
7.—LICENSES.								
Arrack, Rum, and Toddy - -	1638970	28	1547502	44	—		91467	84
Stills - - -	7830	0	7360	0	—		470	0
Wholesale dealers - -	1860	0	790	0	—		1070	0
Opium - -	4400	0	3300	0	—		1100	0
Chanks - - -	4189	45	4080	15	—		109	30
Royalty on Elephants - -	2200	0	400	0	—		1800	0
8.—STAMPS.								
General - - -	869256	58	795489	66	—		73766	92
Postage - - -	224281	8	—		—		224281	8
Composition Duty - -	56945	66	51573	83	—		5371	83
9.—TAXES.								
Assessment on Houses - -	36609	70	27861	78	—		8747	92
10.—POSTAGE.								
Stamps - - -	—		227615	20	227615	20	—	
On Letters, &c. - -	21159	12	20727	50	—		431	62
11.—FINES AND FORFEITURES.								
Supreme, District, and Police Courts -	63233	25	49981	93½	—		13251	31½
Government Agents -	161	73	333	62	171	89	—	
Other Departments - -	3156	41	1658	14	—		1498	27
12.—GOVERNMENT VESSELS -	77840	72	37036	6	—		40804	66
Carried over -	8397158	28	7914930	89¼	263937	16¼	746164	55¼

	Revenue of 1880.		Revenue of 1881.		Increase.		Decrease.	
	Rs	cts.	Rs	cts.	Rs	cts.	Rs	cts.
Brought forward -	8397158	28	7914930	89¼	263937	16½	746164	55¼
13.—SALE OF GOVERNMENT PROPERTY.								
Salt - - -	885820	58	851004	57	—		34816	1
Arrack and Rum - -	3821	20	5456	0	1634	80	—	
Colonial Store - -	43929	11½	216950	86	173021	74½	—	
Timber - - -	280900	23	222145	96½	—		58754	26½
Weights and Measures - -	81	48	99	76	18	28	—	
Unserviceable Tools - -	8372	5	6619	75	—		1752	30
Produce of Botanic Gardens -	7908	81	8360	83	452	2	—	
Crops growing on Crown Lands -	1496	94	1253	81	—		243	13
Royalty on Coral Stones - -	32	50	—		—		32	50
Sale of Delft Horses - -	—		507	0	507	0	—	
Incidental - - -	7371	43	6329	4	—		1042	39
14.—REIMBURSEMENTS.								
Hospital Stoppages - -	4585	53	4677	4	91	51	—	
Government Gazette - -	8101	72	8031	27	—		70	45
School Fees, Books, Stationery, &c. -	29027	66	27874	82	—		1152	84
Irrigation Works - -	14619	43	16503	0½	1883	57½	—	
Survey Fees - -	58474	23½	63994	91	5520	67½	—	
Maintenance of Prisoners -	2405	98	3972	56	1566	58	—	
Value of Tools lost - -	21966	43	7638	64	—		14327	79
Value of Prison Labour - -	2489	75	17986	74	15496	99	—	
Refund of Civil Hospital expenses -	10690	26	11273	1	582	75	—	
Passage Money of Immigrant Coolies -	12774	66	12762	0	—		12	66
Collections at Cemeteries -	3467	84	3400	47	—		67	37
Storage of Gunpowder - -	8315	11	2937	38	—		5377	73
Assessment Tax - -	925	55	922	93	—		2	62
Cost of Police within Municipalities -	123223	81	126778	41	3554	60	—	
Incidental - - -	32448	40	28698	4	—		3750	36
15.—MISCELLANEOUS RECEIPTS.								
Deficiency of Troops - -	95041	67	98041	67	3000	0	—	
Overpayments recovered - -	312823	44½	264840	77	—		47982	67½
Contribution to Widows' Pension Fund	1503	51	1551	83	48	32	—	
Pioneer Pension Contribution -	8783	64	7230	40	—		1553	24
Unclaimed Deposits - -	1421	36½	23856	49	22435	12½	—	
Incidental - - -	35050	5½	26817	86½	—		8232	19
16.—INTEREST.								
On Loan Board Funds - -	25333	2	24621	79	—		711	23
On Arrears of Revenue - -	27478	77½	26459	86	—		1018	91½
On Investments - -	124185	84	97718	42	—		26467	42
17.—PEARL FISHERY - -	200152	25	599533	0	399380	75	—	
18.—SPECIAL RECEIPTS.								
Fees for Title Deeds - -	8990	96	9804	54	813	58	—	
Incidental - - -	2	99	4	49	1	50	—	
19.- RAILWAY RECEIPTS -	3010658	95	2880090	67	—		130568	28
20.—TELEGRAPH RECEIPTS -	27291	67	54810	48	27518	81	—	
Rs	13849127	12	13686491	97¾	921465	77½	1084100	91¾
£	1298355 13	4½	1283108 12	5¼	- -			

Deduct Increase Rs	921465	77½
Nett Decrease ... Rs	162635	14¼
Equal to ... £	15247 0	10¾

REMARKS.

No. 1.—ARREARS OF REVENUE. Greater regularity in the payments of the rent instalments for the preceding year has apparently caused this decrease.

,, 2.—CUSTOMS. Decline in the importation of grain and other articles, principally cotton goods, caused a decrease in Imports, but this has to some extent been compensated for by the increase in the exportation of plumbago.

,, 3.—PORT AND HARBOUR DUES. The increase in the number and tonnage of vessels inwards and outwards contributed to augment the receipts under this head.

,, 4.—LAND SALES. Fewer waste lands have been sold in 1881, hence the decrease.

,, 5.—LAND REVENUE. The decrease is partly attributable to the substitution of the commutation for the renting system, in the Western Province, and partly to unfavourable weather in the Zorth-Western and Southern Provinces, which resulted in the cultivation of a less extent of land. This has, however, been partially compensated for by an abundant harvest in the Northern, North-Central, and Eastern Provinces.

,, 6.—RENTS, EXCLUSIVE OF LAND. The decrease in Toll Rents is due to the diminution in the sums realized by the sale of the rents; and that under the head of Rent of Government Buildings and Houses to the reduction made on the rent of the premises occupied by the Wharf and Warehouse Company.

,, 7.—LICENSES. The sales realized a smaller sum in 1881 than in 1880, and the decrease may be attributed partly to the smaller amount of money in the hands of the community available for the purchase of luxuries, and partly to a very considerable decrease in the immigrant labour force.

,, 8.—STAMPS. As regards general stamps, the decrease is attributable to the slackness in mercantile and other transactions requiring the use of stamps; and as regards postage stamps, the decrease is only nominal, as it will be found that the receipts for 1881 on account of postage stamps have been classified under the head "Postal," and that the amount under that head is in excess of the decreases under "Stamps."

,, 9.—TAXES. The decrease is partly owing to the abandonment of the tax due for the town of Kalutara for the first quarter of the year in consequence of certain legal difficulties in regard to the collection thereof, and partly to the delay in fixing the rates of taxes leviable in the Central Province by Proclamation of Government.

,, 10.—POSTAGE. See Stamps.

,, 11.—FINES AND FORFEITURES. The decrease is only apparent, and is chiefly due to the receipts in 1880 having been credited with value of confiscated opium which had remained in deposit since 1878.

,, 12.—GOVERNMENT VESSELS. This decrease is owing to the Colonial Steamer "Serendib" having been under repairs at Bombay Docks during a portion of the year.

,, 13.—SALE OF GOVERNMENT PROPERTY. The increase under sub-head Colonial Store is the result of the new arrangements adopted regarding the issue of stationery to Public Departments, which rendered necessary the transfer to the general revenue of the value of the stationery in the custody of the Colonial Storekeeper on the 31st December, 1881. The decrease in Salt is accounted for by the failure of the salt supply, which necessitated the importation of salt from India; and in Timber by the dullness of the market and consequent diminished demand for timber. The other items of increase and decrease are casual.

,, 14.—REIMBURSEMENTS. The increase under the sub-head Survey Fees is owing to the transfer to the general revenue of sums in deposit at the Colombo Kachchéri, being fees recovered in former years; in Irrigation Works to good harvests in the Eastern Province, by which the paying capabilities of the people have been improved; in Prison Labour to the earnings of the prisoners employed on the Breakwater works not having been required to cover cost of prison buildings to the extent it was appropriated in 1880. The other items of increase and decrease are casual and will speak for themselves.

,, 15.—MISCELLANEOUS RECEIPTS. The large amount shown as an increase under the head Unclaimed Deposits is the result of a transfer to revenue of unclaimed Courts of Requests deposits between 1866 and 1876. The other items are fluctuating.

,, 16.—INTEREST. The decrease under this head is chiefly owing to the funds invested by the Crown Agents on short loans having been partially withdrawn.

,, 17.—PEARL FISHERY. A larger sum than that realized at the fishery of 1880 contributed to swell the receipts under this head in 1881.

,, 19—RAILWAY RECEIPTS. Failure of coffee crops and general depression in the Island trade and industries, and consequent diminution of goods and passenger traffic, continue to affect the receipts under this head.

,, 20.—TELEGRAPH RECEIPTS. The increase is only apparent, the receipts for the preceding year being collections of only six months.

Audit Office,
Colombo, 27th June, 1882.

W. H. RAVENSCROFT,
Auditor-General and Controller of Revenue.

COMPARATIVE STATEMENT OF THE EXPENDITURE OF THE COLONY OF CEYLON FOR THE YEARS 1880 AND 1881.

		Expenditure of 1880.		Expenditure of 1881.		Increase.		Decrease.	
	ESTABLISHMENTS, INCLUDING FIXED AND PROVISIONAL SALARIES, ALLOWANCES, AND OFFICE CONTINGENCIES.								
	CIVIL ESTABLISHMENTS.	Rs	cts.	Rs	cts.	Rs	cts.	Rs	cts.
1	His Excellency the Governor -	96214	98	95995	27	--		219	71
2	Secretariat - -	188593	81	183911	70	—		4682	11
3	Treasury - -	36717	92	35122	59	—		1595	33
4	Audit Office - -	57345	27	56912	54	—		432	73
	PROVINCIAL AGENCIES.								
5	Western Province - -	141712	85	143934	98	2222	13	—	
6	North-Western Province - -	76111	48½	77962	45½	1850	97	—	
7	Southern do. - -	107713	77	109522	51	1808	74	—	
8	Eastern do. - -	63926	92	63760	39	—		166	53
9	Northern do. - -	108636	98	106956	82	—		1680	16
10	Central do. - -	140549	60	140567	90	18	30	—	
11	North-Central do. - -	42875	7	43637	28	762	21	—	
12	Public Works Department -	337235	42	315169	41	—		22066	1
13	Survey Department - -	269844	68	258607	77	—		11236	91
14	Customs Department - -	150828	47	146995	99	—		3832	48
15	Harbour Department - -	41923	39	44254	45	2331	6	—	
16	Post Office - - -	138025	60	125944	62	—		12080	98
17	Director, Royal Botanic Gardens -	19747	33	22955	68	3208	35	—	
18	Director of Colombo Museum -	22471	21	19875	31	—		2595	90
19	Agent, Colonial Steamer "Serendib" -	27940	41	22983	20	—		4957	21
	JUDICIAL ESTABLISHMENTS.								
20	Supreme Court Judges - -	67707	45	67299	96	—		407	49
21	Registry of the Supreme Court -	22215	60	23120	6	904	46	—	
22	Queen's Advocate and Deputies -	58683	69	60622	97	1939	28	—	
	DISTRICT COURTS, POLICE COURTS, AND COURTS OF REQUESTS.								
23	Western Province - -	127525	66½	127514	78	—		10	88½
24	North-Western Province - -	38435	74	41494	26	3058	52	—	
25	Southern do. - -	72576	55	73244	99	668	44	—	
26	Eastern do. - -	19086	44	19103	30	16	86	—	
27	Northern do. - -	47751	81½	46651	6	—		1100	75½
28	Central do. - -	98008	64	101520	58	3511	94	—	
29	North-Central do. - -	3164	82	3131	50	—		33	32
30	Itinerating District Judge -	5393	55	4799	77	—		593	78
31	Registration Department - -	128342	76	127008	57	—		1334	19
	FISCALS.								
32	Western Province - -	41067	60	41041	48	—		26	12
33	North-Western Province - -	11477	29	11605	94	128	65	—	
34	Southern do. - -	18536	89	19662	44	1125	55	—	
35	Eastern do. - -	5503	1	5510	9	7	8	—	
36	Northern do. - -	15759	43	15704	45	—		54	98
37	Central do. - -	29259	40	29604	18	344	78	—	
38	North-Central do. - -	1688	73	1751	60	62	87	—	
39	Loan Board - - -	5934	95	5728	95	—		206	0
40	Ecclesiastical Establishments -	96216	46	99751	50	3535	4	—	
41	Public Instruction - -	223951	5	230521	80	6570	75	—	
42	Medical Department - -	236662	65	234513	26	—		2149	39
43	Police Department - -	498298	48	496715	45	—		1583	3
44	Prisons Department - -	13691	54	14636	52	944	98	—	
45	Convict Establishments - -	57719	36	54971	25	—		2748	11
46	Colonial Store - -	28058	16	28873	20	815	4	—	
47	Ceylon Government Railway -	488343	48	515057	34	26713	86	—	
48	Crown Agents - -	7732	98	5599	63	—		2133	35
	Rs	4537209	34½	4521831	74½	62549	86	77927	46
	£	425363 7	6¾	423921 14	6	5864 0	11	7305 13	11¼

[continued over]

		Expenditure of 1880.		Expenditure of 1881.		Increase.		Decrease.	
	SERVICES, EXCLUSIVE OF ESTABLISHMENTS.	Rs	cts.	Rs	cts.	Rs	cts.	Rs	cts.
49	Pensions and Retired Allowances -	494438	5	506699	67	12261	62	—	
50	Revenue Services - -	573708	35	650716	68	77008	33	—	
51	Administration of Justice - -	200974	82	215989	44½	15014	62½	—	
52	Ecclesiastical - -	3000	0	3000	0	—		—	
53	Charitable Allowances - -	44815	65	47122	40½	2306	75½	—	
54	Education - -	286504	89	273779	0	—		12725	89
55	Hospitals and Sanitation - -	323854	70	316513	72	—		7340	98
56	Police Services - -	116319	99	163017	49	46697	50	—	
57	Prison Services - -	366927	65	340803	60	—		26124	5
58	Rent - -	6517	40	3402	50	—		3114	90
59	Transport - -	99927	22	100456	66½	529	44½	—	
60	Conveyance of Mails - -	241484	69	251109	42	9624	73	—	
61	Works and Buildings - -	399047	68	135342	5	—		263705	63
62	Roads, Streets, Bridges and Canals -	2536261	66	1650890	5	—		885371	61
63	Miscellaneous Services - -	163112	49	256977	17	93864	68	—	
64	Interest - - -	186550	90	186741	26	190	36	—	
64*b*	Redemption of Kredit Brieven -	—		1982	40	1982	40	—	
65	Colonial Store - -	118977	53	187303	68	68326	15	—	
66	Contribution towards Military Expenditure - - -	1239999	96	1276316	87	36316	91	—	
67	Government Vessels - -	79341	11	166001	42	86660	31	—	
68	Refund of Duties, Drawbacks, &c. -	54486	71	47013	96	—		7472	75
69	Lands taken for Government purposes -	5373	87	1966	25	—		3407	62
70	Immigration - - -	110813	0	104254	33	—		6558	67
71	Railway Services - -	1791320	53	1880149	54	88829	1	—	
72	Railway Construction - -	—		—		—		—	
73	Electric Telegraph - -	88659	40	198128	0	109468	60	—	
74	Exchange - -	194862	45	45749	74	—		149112	71
	Rs	9727280	70	9011427	31½	649081	42½	1364934	81
	£	911932	11 4	844821	6 2	60851	7 7	127962	12 9
	RECAPITULATION.								
	Establishments - -	4537209	34½	4521831	74½	62549	86	77927	46
	Services, exclusive of Establishments -	9727280	70	9011427	31½	649081	42½	1364934	81
	Rs	14264490	4½	13533259	6	711631	28½	1442862	27
	TOTAL—£	1337295	18 10	1268743	0 9	66715	8 8	135268	6 9

Audit Office,
Colombo, 27th June, 1882.

W. H. RAVENSCROFT,
Auditor-General and Controller of Revenue.

EXPLANATORY STATEMENT OF THE FOREGOING.

	Rs	cts.	Rs	cts.	Rs	cts.
CIVIL ESTABLISHMENTS.						
1.—HIS EXCELLENCY THE GOVERNOR.						
Decrease on Fixed Salaries - - -	65	86				
Do. Provisional Salaries - -	154	74				
			220	60		
Increase on Contingencies - - -		-	0	89		
Nett Decrease -					219	71
2.—SECRETARIAT.						
Decrease on Fixed Salaries - - -		-	1697	11		
Do. Provisional Salaries - - -		-	1574	80		
Do. Contingencies - - -		-	1410	20		
Total Decrease -					4682	11
3.—TREASURY.						
Decrease on Fixed Salaries - - -		-	325	0		
Do. Provisional Salaries - - -		-	390	83		
Do. Allowances - - -		-	823	95		
Do. Contingencies - - -		-	55	55		
Total Decrease -					1595	33
4.—AUDIT OFFICE.						
Increase on Fixed Salaries - - -	0	1				
Do. Provisional Salaries - - -	0	3				
			0	4		
Decrease on Contingencies - - -		-	432	77		
Nett Decrease -					432	73

	Rs.	cts.	Rs.	cts.	Rs.	cts.
PROVINCIAL AGENCIES :—						
5.—*Western Province.*						
Increase on Provisional Salaries - -	- 2205	11				
Do. Contingencies - -	- 754	87				
			2959	98		
Decrease on Fixed Salaries - -	-	-	737	85		
Nett Increase		-			2222	13
6.—*North-Western Province.*						
Increase on Fixed Salaries - -	-	-	72	89		
Do. Provisional Salaries - -	-	-	942	41		
Do. Contingencies - -	-	-	835	67		
Total Increase		-			1850	97
7.—*Southern Province.*						
Increase on Provisional Salaries - -	- 2209	8				
Do. Allowances - - -	- 180	0				
			2389	8		
Decrease on Fixed Salaries - -	- 281	6				
Do. Contingencies - -	- 299	28				
			580	34		
Nett Increase		-			1808	74
8.—*Eastern Province.*						
Decrease on Fixed Salaries - -	-	-	229	12		
Increase on Provisional Salaries - -	- 18	25				
Do. Contingencies - -	- 44	34				
			62	59		
Nett Decrease		-			166	53
9.—*Northern Province.*						
Decrease on Fixed Salaries - -	-	-	933	79		
Do. Provisional Salaries - -	-	-	591	46		
Do. Contingencies - -	-	-	154	91		
Total Decrease		-			1680	16
10.—*Central Province.*						
Increase on Fixed Salaries - -	- 233	30				
Do. Provisional Salaries - -	- 298	49				
			531	79		
Decrease on Contingencies - -	-	-	513	49		
Nett Increase		-			18	30
11.—*North-Central Province.*						
Increase on Fixed Salaries - -	-	-	270	50		
Do. Provisional Salaries - -	-	-	267	85		
Do. Contingencies - -	-	-	223	86		
Total Increase		-			762	21
12.—PUBLIC WORKS DEPARTMENT.						
Decrease on Fixed Salaries - -	-	-	4930	17		
Do. Provisional Salaries - -	-	-	16403	4		
Do. Allowances - -	-	-	499	92		
Do. Contingencies - -	-	-	232	88		
Total Decrease		-			22066	1
13.—SURVEY DEPARTMENT.						
Decrease on Provisional Salaries - -	- 12896	96				
Do. Allowances - -	- 1	25				
			12898	21		
Increase on Fixed Salaries - -	-	-	1661	30		
Nett Decrease		-			11236	91
14.—CUSTOMS DEPARTMENT.						
Decrease on Fixed Salaries - -	- 27	93				
Do. Provisional Salaries - -	- 2633	92				
Do. Contingencies - -	- 1170	71				
			3832	56		
Increase on Allowances - -	-	-	0	8		
Nett Decrease		-			3832	48
15.—HARBOUR DEPARTMENT.						
Increase on Fixed Salaries - -	- 116	77				
Do. Provisional Salaries - -	- 2032	23				
Do. Allowances - -	- 342	62				
			2491	62		
Decrease on Contingencies - -	-	-	160	56		
Nett Increase		-			2331	6
16.—POST OFFICE.						
Decrease on Fixed Salaries - -	- 602	39				
Do. Contingencies - -	- 15090	36				
			15692	75		
Increase on Provisional Salaries - -	- 3531	77				
Do. Allowances - -	- 80	0				
			3611	77		
Nett Decrease		-			12080	98

	Rs cts.	Rs cts.	Rs cts.
17.—Director, Botanic Gardens.			
Increase on Fixed Salaries - - -	-	4 17	
Do. Provisional Salaries - - -	-	2189 72	
Do. Contingencies - - -	-	1014 46	
Total Increase -			3208 35
18.—Director of Colombo Museum.			
Decrease on Provisional Salaries -	-	1113 41	
Do. Contingencies - - -	-	1482 49	
Total Decrease -			2595 90
19.—Agent, Colonial Steamer "Serendib."			
Decrease on Provisional Salaries - -	-	3460 33	
Do. Allowances - - -	-	1496 88	
Total Decrease -			4957 21
JUDICIAL ESTABLISHMENTS.			
20.—Supreme Court Judges.			
Decrease on Provisional Salaries - -	-	—	407 49
21.—Registrar, Supreme Court.			
Increase on Fixed Salaries - -	-	733 35	
Do. Contingencies - -	-	171 11	
Total Increase -			904 46
22.—Queen's Advocate and Deputies.			
Increase on Provisional Salaries - -	- 1943 39		
Do. Contingencies - -	- 37 70		
		1981 9	
Decrease on Fixed Salaries - -	-	41 81	
Nett Increase -			1939 28
District Courts, Courts of Requests, and Police Courts.			
23.—*Western Province.*			
Decrease on Fixed Salaries - -	-	426 10	
Increase on Provisional Salaries - -	- 126 56½		
Do. Contingencies - -	- 288 65		
		415 21½	
Nett Decrease -			10 88½
24.—*North-Western Province.*			
Increase on Fixed Salaries - -	- 2732 46		
Do. Provisional Salaries - -	- 571 90		
		3304 36	
Decrease on Contingencies - -	-	245 84	
Nett Increase -			3058 52
25.—*Southern Province.*			
Increase on Provisional Salaries - -	-	1222 52	
Decrease on Fixed Salaries - -	- 112 14		
Do. Contingencies - -	- 441 94		
		554 8	
Nett Increase -			668 44
26.—*Eastern Province.*			
Increase on Provisional Salaries - -	-	0 4	
Do. Contingencies - -	-	16 82	
Total Increase -			16 86
27.—*Northern Province.*			
Decrease on Provisional Salaries - -	- 1098 75		
Do. Contingencies - -	- 74 60½		
		1173 35½	
Increase on Fixed Salaries - -	-	72 60	
Nett Decrease -			1100 75½
28.—*Central Province.*			
Increase on Fixed Salaries - -	- 3388 66		
Do. Provisional Salaries - -	- 292 34		
		3681 0	
Decrease on Contingencies - -	-	169 6	
Nett Increase -			3511 94
29.—*North-Central Province.*			
Decrease on Contingencies - -	-	35 75	
Increase on Fixed Salaries - -	- 2 16		
Do. Provisional Salaries - -	- 0 27		
		2 43	
Nett Decrease -			33 32
30.—Itinerating District Judge.			
Decrease on Provisional Salaries - -	-	—	593 78
31.—Registration Department.			
Decrease on Fixed Salaries - -	- 1884 52		
Do. Provisional Salaries - -	- 3506 54		
Do. Contingencies - -	- 831 13		
		6222 19	
Increase on Allowances - -	-	4888 0	
Nett Decrease -			1334 19

	Rs	cts.	Rs	cts.	Rs	cts.
Fiscals.						
32.—*Western Province.*						
Decrease on Fixed Salaries	100	99				
Do. Contingencies	660	83				
			761	82		
Increase on Provisional Salaries	592	33				
Do. Allowances	143	37				
			735	70		
Nett Decrease					26	12
33.—*North-Western Province.*						
Increase on Fixed Salaries			178	97		
Decrease on Provisional Salaries	20	76				
Do. Contingencies	29	56				
			50	32		
Nett Increase					128	65
34.—*Southern Province.*						
Increase on Fixed Salaries			374	45		
Do. Provisional Salaries			611	91		
Do. Contingencies			139	19		
Total Increase					1125	55
35.—*Eastern Province.*						
Increase on Contingencies			19	22		
Decrease on Fixed Salaries			12	14		
Nett Increase					7	8
36.—*Northern Province.*						
Decrease on Provisional Salaries	130	91				
Do. Contingencies	39	35				
			170	26		
Increase on Fixed Salaries			115	28		
Nett Decrease					54	98
37.—*Central Province.*						
Increase on Fixed Salaries	7	73				
Do. Provisional Salaries	414	80				
			422	53		
Decrease on Contingencies			77	75		
Nett Increase					344	78
38.—*North-Central Province.*						
Increase on Fixed Salaries			8	31		
Do. Provisional Salaries			10	0		
Do. Contingencies			44	56		
Total Increase					62	87
39.—Loan Board.						
Decrease on Provisional Salaries			200	0		
Do. Contingencies			6	0		
Total Decrease					206	0
40.—Ecclesiastical Department.						
Increase on Fixed Salaries			1681	28		
Do. Provisional Salaries			509	81		
Do. Allowances			1343	95		
Total Increase					3535	4
41.—Public Instruction.						
Increase on Provisional Salaries			7135	61		
Decrease on Fixed Salaries			564	86		
Nett Increase					6570	75
42.—Medical Department.						
Decrease on Fixed Salaries	3268	1				
Do. Provisional Salaries	159	9				
Do. Contingencies	973	19				
			4400	29		
Increase on Allowances			2250	90		
Nett Decrease					2149	39
43.—Police Department.						
Decrease on Provisional Salaries	1427	19				
Do. Allowances	250	0				
			1677	19		
Increase on Fixed Salaries			94	16		
Nett Decrease					1583	3
44.—Prisons Department.						
Increase on Provisional Salaries			979	7		
Decrease on Fixed Salaries			34	9		
Nett Increase					944	98
45.—Convict Establishment.						
Decrease on Fixed Salaries			960	17		
Do. Provisional Salaries			1787	94		
Total Decrease					2748	11
46.—Colonial Store.						
Increase on Fixed Salaries			423	21		
Do. Provisional Salaries			391	83		
Total Increase					815	4

	Rs cts.	Rs cts.	Rs cts.
47.—Ceylon Government Railway.			
Increase on Provisional Salaries - - - -		24580 54	
Do. Allowances - - - -		2133 32	
Total Increase -			26713 86
48—Crown Agents.			
Decrease on Provisional Salaries - - - -		0 1	
Do. Allowances - - - -		2133 34	
Total Decrease -			2133 35

49.—Pensions.—The addition of new pensioners is the chief cause of increase under this head.

50.—Revenue Services.—The increase is attributable to the importation of salt from India to supplement local supply, and to the large harvest collected in 1882, the season having been more favourable for manufacture than in either of the three previous years.

51.—Administration of Justice.—This is attributable partly to the protracted Assizes of the Supreme Court Criminal Sessions, and partly to extra Sessions of the Supreme Court at Ratnapura and Mátalé.

52.—Ecclesiastical.—The expenditure is the same as in the preceding year.

53.—Charitable Allowances.—In all the Provinces, but chiefly in the Central and Southern, there was an increase in the number of paupers, to whom it was necessary to afford relief, and this has caused an increase of expenditure under this head.

54.—Education.—There has been a decrease under this head, partly due to an indent for books not having been executed within the year, and partly to large savings effected in the management of Government schools.

55.—Hospitals and Sanitation.—The decrease is due to the fact that the health of the population throughout the country was generally satisfactory.

56 & 57.—Police and Prison Services.—The increase is accounted for partly by the failure of the Police Department to debit the cost of arms and ammunition obtained from England in 1880 against the vote of that year, which rendered it necessary to bring the charge to account against the votes of 1881, and also by an increase in the number of convicts and persons in confinement awaiting trial.

58.—Rent.—The decrease is partly due to a diminution of expenditure in connection with the Census Branch of the Registrar-General's Department, and partly to the fact that the rent paid by the Telegraph Department, hitherto brought to account under this heading, was transferred in 1881 to Telegraph Services.

59.—Transport.—This increase is very small and does not callfor observation.

60.—Conveyance of Mails.—Ceylon having been brought within the Postal Union, an increased expenditure became necessary to cover "Loss on mails to London."

61.—Works and Buildings.—The sums voted for expenditure in 1881 were much smaller than those voted in the preceding year, the spending power of the Colony having been reduced owing to the falling off in the revenue.

62.—Roads, Streets, and Bridges.—The same cause as the foregoing operated in the reduction of the expenditure under this head.

63.—Miscellaneous Services.—The expenditure incurred in connection with the taking of a Census caused this increase.

64.—Interest.—The small increase under this head does not call for observation.

64*b*.—Redemption of Kredit Brieven.—The charge speaks for itself and does not call for observation.

65.—Colonial Store.—The increased expenditure became necessary to replace the stationery caused by the loss of the Steamer "Penguin."

66.—Contribution towards Military Expenditure.—The formation of a Local Volunteer Corps contributed to swell the expenditure under this heading.

67.—Government Vessels.—The extensive repairs effected to the Colonial Steamer "Serendib" at the Bombay Docks, including the substitution of a new boiler, caused an increased expenditure.

68.—Refund of Duties, etc.—This item is subject to fluctuation, and does not call for observation.

69.—Lands taken for Government Purposes.—This is also subject to fluctuation, and is dependent upon the requirements of Government.

70.—Immigration.—The depression in the planting enterprise, and the consequent falling off in the number of labourers from Southern India seeking employment in the coffee districts, contributed to decrease the expenditure under this heading.

71.—Railway Services.—The payment of interest on the loans raised for the construction of the Mátalé and Nánu-oya railways in 1880 was made for a period of half a year, whilst that made in 1881 was for the full year, hence an increased expenditure in the latter year. This increase in expenditure was to some extent compensated for by a reduction in the working expenses.

73.—Telegraph Services.—The increase is accounted for by the fact that the expenditure for 1881 was for the full year, while that for 1880 was for half a year only. The increase is also due to the large expenditure incurred on account of Telegraph stores taken over from Indian Telegraph Department, and on account of dies for stamps.

74.—Exchange.—The decrease is due to the more favourable rates which ruled during the year 1881.

Audit Office,
Colombo, 27th June, 1882.

W. H. RAVENSCROFT,
Auditor-General and Controller of Revenue.

IV.—STATEMENT showing the ASSETS and LIABILITIES of the Government of Ceylon on the 31st December, 1881.

ASSETS.		Rs.	cts.	Rs	cts.	£	s.	d.
Cash in the hands of the Crown Agents	Rs. 129718 60							
Cash in the General Treasury and District Chests	1233944 84¼							
		1363663	44¼					
Invested in England in Colonial Stocks—£13,600 @ 1*s.* 8*d.*		523200	0					
Do. on short loans		5097594	66					
Loans made to Municipal Council, Kandy		241846	45					
Interest due on above loan by the Municipal Council		35092	2					
Recoverable advances on account of Harbour Works		2147911	56					
Do. do. Railway Extension Surveys		44180	93					
Do. do. Mátalé Railway		197451	41					
Do. do. Colombo Waterworks		1768116	1					
Do. do. Seed Paddy		68636	33					
Do. do. Stores for Public Service		1030302	0					
Do. do. Melbourne Exhibition		7000	0					
Do. do. Ceylon Volunteers		16000	0					
Do. do. Municipal Council, Kandy		10000	0					
Do. do. Industrial School, Kandy		9980	0					
Other recoverable advances to Public Departments		366098	43					
Amount due by Hotels Company on account of land transferred		7475	50					
Amount due by the Government of Straits Settlements		953	50					
Advance by the Crown Agents to Public Officers, to be recovered		1193	34					
Do. do. to Nánu-oya Railway Contractors		5197	43					
Sundry payments by the Crown Agents to be recovered		23656	44					
Recoverable advance on account of 2¼ mile railway bridge		8972	82					
Recoverable arrears of revenue		600000	0					
Surcharges outstanding		200000	0					
				13774822	27¼	1291389	11	9
LIABILITIES								
Deposits—General	Rs. 11515701 63¾							
Lapsed Loan Board	„ 99620 69							
		11615322	32¾					
Balance due to Government of India		133668	62					
Do. Agents, Bombay		60294	36					
Do. Agents, Madras		1069	79					
Do. Agents, Calcutta		8634	22					
Temporary advance from the Local Banks		47946	46					
Family Remittances outstanding		26043	36					
Due to Railway Contractors, interest on Guarantee Fund		19	7					
Unexpended balances of ordinary votes brought forward for expenditure in 1882		25071	65					
Unexpended balances of votes on Surplus Funds Ordinance, No. 13 of 1879		240484	32					
Balance of Drafts and Remittances outstanding		156821	80					
				12315376	97¾	1154566	11	10
Excess of Assets over Liabilities		—		1459445	29½	136822	19	11
Total Assets		—		13774822	27¼	1291389	11	9

Audit Office,
Colombo, 27th June, 1882.

W. H. RAVENSCROFT,
Auditor-General and Controller of Revenue.

V.—STATEMENT OF THE CASH TRANSACTIONS OF THE COLONY FOR THE YEAR 1881.

	Rs	cts.	£	s.	d.
To Balance on the 31st December, 1880	1,798,654	75			
Gross Revenue for the year	13,868,491	97¾			
Drafts drawn during the year	10,479,819	47½			
Deposits during the year	18,288,016	9			
Remittances received	3,987,267	90			
Advances repaid	5,123,926	14			
Sums placed to the credit of Her Majesty's Government	1,606	71			
Do. Government of India	254,865	85			
Do. Straits Government	528	15			
Do. Agents at Calcutta	9,773	28			
Do. Agents at Bombay	108,995	98			
Do. Agents at Madras	9,681	61			
Do. Crown Agents	4,048,171	84			
Receipts of the Crown Agents	14,354,928	36			
Nominal value of Cent coins received	25,000	0			
Temporary Loans from Local Banks	47,946	0			
Total ...	72,225,674	60¼	6,771,153	19	10½

	Rs	cts.	£	s.	d.
By Gross Expenditure of the year, viz.:—					
On Votes of the year	13,533,259	6			
Against Balances of previous years' votes brought forward in 1881	55,640	93			
On votes allowed by Surplus Funds Ordinance, No. 13 of 1879	389,949	47			
	13,978,849	46			
By Drafts paid during the year	10,578,454	9			
Payments from deposits	13,539,138	50			
Remittances made	4,102,092	33			
Advances made	6,720,688	74			
Sums debited to Her Majesty's Government	2,034	99			
Do. Government of India	235,173	64			
Do. Straits Government	1,030	90			
Do. Agents at Calcutta	1,203	0			
Do. Agents at Madras	9,161	0			
Do. Agents at Bombay	49,006	15			
Do. Crown Agents	7,321,170	61			
Disbursements made by the Crown Agents	14,312,731	33			
Cost of new Cent coins	11,276	42			
By Balance on the 31st December, 1881, viz.:—					
In the Colony (Rs 1,233,944 84½)					
In England (Rs 129,718 60)	1,363,663	44¼			
Total ...	72,225,674	60¼	6,771,153	19	10½

Audit Office,
Colombo, 27th June, 1882.

W. H. RAVENSCROFT,
Auditor-General and Acting Controller of Revenue.

VI.—STATEMENT showing the BALANCE of the Ceylon Government AVAILABLE FOR APPROPRIATION on 31st December, 1881.

NIL.

Audit Office,
Colombo, 27th June, 1881.

W. H. RAVENSCROFT,
Auditor-General and Controller of Revenue.

VII.—*STATEMENT showing the REVENUE and EXPENDITURE of the Colony of Ceylon for the Nine months ended 30th September, 1882.*

REVENUE.	Rs.	cts.
Arrears of revenue of former years recovered	361,607	64
Revenue of the Current Year.		
Customs	2,130,092	68
Port and Harbour Dues	119,018	19
Land Sales...	202,253	0½
Land Revenue	644,637	40
Rents, exclusive of Lands	270,208	90
Licenses	1,079,213	25
Stamps	634,344	60
Taxes—Assessment on Houses and Gardens	14,334	44
Postal	177,090	31½
Fines and Forfeitures	34,676	57
Government Vessels	43,584	79
Sale of Government Property	691,885	94
Reimbursements in aid of expenses incurred by Government	262,062	39½
Interest	120,344	51
Miscellaneous Receipts	222,938	23
Special Receipts	5,203	88
Pearl Fishery	482	68
Railway Receipts	2,043,919	73
Telegraph Receipts	15,185	79
Rs...	9,073,084	93½

EXPENDITURE.	Rs.	cts.
Establishments.		
Fixed Salaries	1,437,444	18
Provisional and Temporary Salaries	1,667,842	51
Allowances	32,310	8
Office Contingencies	94,691	55½
Services, exclusive of Establishments.		
Pensions and Retired Allowances	281,065	54
Revenue Services	270,639	24
Administration of Justice	143,086	37½
Ecclesiastical	1,192	24
Charitable Allowances	32,586	43
Education	172,509	69
Hospitals	198,128	11
Police and Jails	322,527	90½
Rent	2,183	52
Transport...	65,457	13½
Conveyance of Mails	152,770	9
Works and Buildings	65,743	34
Roads, Streets, and Bridges	901,763	96
Miscellaneous	104,292	23
Interest	78,253	41
Colonial Store	15,660	39
Contribution towards Military Expenditure	954,904	30
Government Vessels	18,545	40
Refund of Duties	34,439	92
Lands taken for Government purposes	704	22
Immigration	62,293	36
Railway Services	851,286	66
Telegraph Services	101,343	8
Rs...	8,063,664	87

Audit Office,
Colombo, 19th October, 1882.

W. H. RAVENSCROFT,
Auditor-General and Controller of Revenue.

VIII.—*COMPARATIVE STATEMENT of the REVENUE and EXPENDITURE of the Colony of Ceylon for the Nine Months ended 30th September, 1881-82.*

REVENUE.	Nine months ended 30th September, 1881.	Nine months ended 30th September, 1882.	Increase.	Decrease.
	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.
Arrears of Revenue of former years recovered	381,162 93½	361,607 64	—	19,555 29½
Revenue of the Current Year.				
Customs	2,228,665 16	2,130,092 68	—	98,572 48
Port and Harbour Dues...	111,049 32	119,018 19	7,968 87	—
Land Sales ...	248,459 55½	202,253 0½	—	46,206 55
Land Revenue ...	640,902 63	644,637 40	3,734 77	—
Rents, exclusive of Lands	277,661 39	270,208 90	—	7,452 49
Licenses	1,113,939 66	1,079,213 25	—	34,726 41
Stamps	670,171 76	634,344 60	—	35,827 16
Taxes, Assessment on Houses and Gardens ...	10,320 55½	14,334 44	4,013 88½	—
Postal ... : ...	181,223 68	177,090 31½	—	4,133 36½
Fines and Forfeitures ...	36,506 45½	34,676 57	—	1,829 88½
Government Vessels ...	18,562 77	43,584 79	25,022 2	—
Sale of Government Property	739,881 19	691,885 94	—	47,995 25
Reimbursements in aid of expenses incurred by Government ...	352,610 2½	262,062 39½	—	90,547 63
Interest	76,898 17	120,344 51	43,446 34	—
Miscellaneous receipts ...	210,979 81	222,938 23	11,958 42	—
Special Receipts ...	8,791 66	5,203 88	—	3,587 78
Pearl Fishery ...	—	482 68	482 68	—
Railway Receipts ...	2,019,633 40	2,043,919 73	24,286 33	—
Telegraph Receipts ...	350 0	15,185 79	14,835 79	—
Total—Rs.	9,327,770 12½	9,073,084 93½	135,749 10½	390,434 29½
			Deduct Increase ...	135,749 10½
			Nett Decrease...Rs.	254,685 19

EXPENDITURE.	Nine months ended 30th September, 1881.	Nine months ended 30th September, 1882.	Increase.	Decrease.
Establishments.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.
Fixed Salaries ...	1,446,580 69	1,437,444 18	—	9,136 51
Provisional & Temporary Salaries	1,670,824 69	1,667,842 51	—	2,982 18
Allowances	51,680 11	32,310 8	—	19,370 3
Office Contingencies ...	62,502 64½	94,691 55½	32,188 91	—
Services, exclusive of Establishments.				
Pensions and Retired Allowances	300,276 82	281,065 54	—	19,211 28
Revenue Services ...	354,121 71	270,639 24	—	83,482 47
Administration of Justice ...	132,168 58½	143,086 37½	10,917 79	—
Ecclesiastical ...	1,000 0	1,192 24	192 24	—
Charitable Allowances ...	32,198 59	32,586 43	387 84	—
Education ...	206,609 44	172,509 69	—	34,099 75
Hospitals	187,174 11	198,128 11	10,954 0	—
Police and Jails ...	289,705 8	322,527 90½	32,822 82½	—
Rent	2,380 37	2,183 52	—	196 85
Transport	71,628 88	65,457 13½	—	6,171 74½
Conveyance of Mails ...	173,862 96	152,770 9	—	21,092 87
Works and Buildings ...	77,792 21	65,743 34	—	12,048 87
Roads, Streets, and Bridges ...	1,016,890 12	901,763 96	—	115,126 16
Miscellaneous ...	153,531 7	104,292 23	—	49,238 84
Interest	132,508 20	78,253 41	—	54,254 79
Colonial Store ...	24,737 89	15,660 39	—	9,077 50
Contribution towards Military Expenditure ...	929,999 97	954,904 30	24,904 33	—
Government Vessels ...	68,462 25	18,545 40	—	49,916 85
Refund of Duties ...	27,794 51	34,439 92	6,645 41	—
Lands taken for Government Purposes... ...	571 22	704 22	133 0	—
Immigration ...	62,451 22	62,293 36	—	157 86
Railway Services ...	1,067,013 12	851,286 66	—	215,726 46
Telegraph Services ...	83,424 64	101,343 8	17,918 44	—
Total—Rs.	8,627,891 10	8,063,664 87	137,064 78½	701,291 1½
			Deduct Increase ..	137,064 78½
			Nett Decrease ... Rs.	564,226 23

Audit Office
Colombo, 19th October, 1882.

W. H. RAVENSCROFT.
Controller-General of Revenue.

IX.—*COMPARATIVE Statement of the Estimated and Actual REVENUE and EXPENDITURE of the Colony of Ceylon for the Nine Months ended 30th Sept., 1882.*

REVENUE.	Estimated.		Actual.		Increase.		Decrease.	
	Rs.	cts.	Rs.	cts.	Rs.	cts.	Rs.	cts.
Arrears of revenue of former years recovered	300,000	0	361,607	64	61,607	64	—	
Revenue of the Current Year.								
Customs	2,250,000	0	2,130,092	68	—		119,907	32
Port and Harbour Dues ...	108,750	0	119,018	19	10.268	19	—	
Land Sales	262,500	0	202,253	0½	—		60,246	99½
Land Revenue ...	656,250	0	644,637	40	—		11,612	60
Rents, exclusive of Lands	270,000	0	270,208	90	208	90	—	
Licenses	1,177,500	0	1,079,213	25	—		98,286	75
Stamps	675,000	0	634,344	60	—		40,655	40
Taxes, Assessment on Houses and Gardens ...	22,500	0	14,334	44	—		8,165	56
Postage	180,000	0	177,090	31½	—		2,909	68½
Fines and Forfeitures ...	33,750	0	34,676	57	926	57	—	
Government Vessels ...	52,500	0	43,584	79	—		8,915	21
Sale of Government Property	862,500	0	691,885	94	—		170,614	6
Reimbursements in aid of Expenses incurred by Government ...	225,000	0	262,062	39½	37,062	39½	—	
Interest	150,000	0	120,344	51	—		29,655	49
Miscellaneous ...	202,500	0	222,938	23	20,438	23	—	
Special Receipts ...	7,500	0	5,203	88	—		2,296	12
Pearl Fishery ...	—		482	68	482	68	—	
Railway Receipts ...	2,287,500	0	2,043,919	73	—		243,580	27
Telegraph	45,000	0	15,185	79	—		29,814	21
	9,768,750	0	9,073,084	93½	130,994	60½	826,659	67
					Deduct Increase ...		130,994	60½
					Nett Decrease ...		695,665	6½

EXPENDITURE.	Estimated.		Actual.		Increase.		Decrease.	
Establishments.	Rs.	cts.	Rs.	cts.	Rs.	cts.	Rs.	cts.
Fixed Salaries	1,517,114	25	1,437,444	18	—		79,670	7
Provisional and Temporary Salaries	1,854,844	51½	1,667,842	51	—		187,002	0½
Allowances	66,183	75	32,310	8	—		33,873	67
Office Contingencies ...	78,537	52½	94,691	55½	16,154	3	—	
Services exclusive of Establishments.								
Pensions and Retired Allowances ...	378,993	0	281,065	54	—		97,927	46
Revenue Services	348,231	75	270,639	24	—		77,592	51
Administration of Justice ...	137,770	50	143,086	37½	5,315	87½	—	
Ecclesiastical	2,388	0	1,192	24	—		1,195	76
Charitable Allowances ...	34,275	0	32,586	43	—		1,688	57
Education	191,838	75	172,509	69	—		19,329	6
Hospitals	287,559	37½	198,128	11	—		89,431	26½
Police Services	88,815	0	88,025	3	—		789	97
Prison Services	267,945	0	234,502	87½	—		33,442	12½
Rent	2,347	50	2,183	52	—		163	98
Transport	75,431	25	65,457	13½	—		9,974	11½
Conveyance of Mails ...	202,766	7	152,770	9	—		49,995	98
Works and Buildings ...	103,087	50	65,743	34	—		37,344	16
Roads, Streets, and Bridges ...	1,184,226	0	901,763	96	—		282,462	4
Miscellaneous	132,624	37½	104,292	23	—		28,332	14½
Interest	156,927	37½	78,253	41	—		78,763	96½
Colonial Store	33,479	94	15,660	39	—		17,819	55
Contribution towards Military Expenditure	954,000	0	954,904	30	904	30	—	
Government Vessels ...	45,000	0	18,545	40	—		26,454	60
Refund of Duties	37,500	0	34,439	92	—		3,060	8
Lands taken for Government Purposes	10,095	0	704	22	—		9,390	78
Immigration	84,705	0	62,293	36	—		22,411	64
Railway Services	1,322,938	50	851,286	66	—		471,651	84
Exchange	37,500	0	—		—		37,500	0
Telegraph Services ..	80,589	96	101,843	8	20,753	12	—	
	9,717,714	88½	8,063,664	87	43,127	32½	1,697,177	34
					Deduct Increase ...		43,127	32½
					Nett Decrease ...		1,654,050	1½

Audit Office,
Colombo, 19th October, 1882.

W. H. RAVENSCROFT,
Auditor-General.

X.—*ESTIMATE of the REVENUE and EXPENDITURE of the Colony of Ceylon for the Year* 1883.

REVENUE.	Rs.	cts.
Arrears of Revenue of former years ...	400,000	0
Customs	2,730,000	0
Port and Harbour Dues .	450,000	0
Land Sales	250,000	0
Land Revenue	875,000	0
Rents, exclusive of Land ...	360,000	0
Licenses	1,500,000	0
Stamps	840,000	0
Taxes	30,000	0
Postage	240,000	0
Fines, Forfeitures, and Fees of Court ...	50,000	0
Government Vessels ...	60,000	0
Sale of Government Property ...	1,050,000	0
Reimbursements in aid of Expenses incurred by Government ...	300,000	0
Electric Telegraph	65,000	0
Miscellaneous Receipts ...	350,000	0
Interest	100,000	0
Special Receipts	10,000	0
Railway Receipts	2,750,000	0
Total Rs.—	12,410,000	0

EXPENDITURE.	Rs. cts.	Rs. cts.	Rs cts.
Fixed Establishments.			
Civil	1,116,097 75		
Do.	4,920 0		
Judicial	606,190 0		
Ecclesiastical	87,200 0		
Public Instruction	37,750 0		
Medical	85,050 0		
Police	23,500 0		
Prisons	10,650 0		
Convict Establishment	12,840 0		
Colonial Store	26,271 25		
		2,010,469 0	
Interest on Breakwater loan	--	208,734 0	
Contribution towards Military Expenditure ...	—	1,240,000 0	
Railway Interest and Sinking Fund	—	613,530 0	
			4,072,733 0
Charges voted by the Legislative Council in Appropriation Ordinance for 1883	—	—	8,222,123 65
			12,294,856 65
Surplus Revenue	—	—	115,143 35
		Total— Rs.	12,410,000 0

Council Chamber,
Colombo, 15th December, 1882.

J. DOUGLAS,
Colonial Secretary.

XXXV.—1882.

RAILWAY EXTENSION TOWARDS UVA.

FURTHER CORRESPONDENCE

RELATING TO

THE HAPUTALE SECTION.

(In continuation of Sessional Paper No. XVIII. of 1881.*)*

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

RAILWAY EXTENSION TO HAPUTALE.

The Right Hon. the Earl of KIMBERLEY to Governor Sir J. R. LONGDEN, K.C.M.G.

No. 395.—*Ceylon.* Downing-street, 16th November, 1882.

SIR,—I HAVE the honour to acknowledge the receipt of your despatches Nos. 401, of the 21st September, and 416, of the 29th of September, enclosing, respectively, copies of the address with which you opened the present Session of the Legislative Council, and of the reply which the Council made to it.

2. Your opening speech alludes to many points of interest, but there is only one to which I need at present refer, and that is the subject of railway extension.

3. This subject is touched upon in paragraph 35, in which, after stating that you have not received an answer from me to the resolution of Council in favour of the immediate commencement of the Haputalé extension, you add—

"With no part of the Nánu-oya line yet open to traffic, or any immediate prospect of an early opening, with the Mátalé line not even paying its working expenses, and with a still falling revenue, it would be clearly inopportune to urge at present the immediate undertaking of a fresh burden involving an expenditure of seven millions of rupees."

4. Upon receipt of your despatch No. 110, of the 8th of March, enclosing the resolution alluded to above, reference was made to the Consulting Engineer in a letter, of which a copy is enclosed, requesting him to consider at what date, in view of the progress made on the Nánu-oya line, the further extension to Haputalé ought to be taken in hand, supposing that it were decided not to postpone the construction of it; and from his reply, a copy of which is also enclosed, it will be seen that, in his opinion, the point which has now been reached on the Nánu-oya line justifies, from an engineering point of view, the immediate undertaking of the further extension.

5. I have, however, reluctantly come to the conclusion that the scheme cannot for the present be proceeded with. The very serious depression in the colony and the great diminution of the Colonial revenue, which has now been continuous for no less than five years, render it, in my opinion, impossible consistently with ordinary financial prudence to embark in so heavy an outlay.

The loss incurred on the working of the Mátalé branch railway affords a further and special reason for not committing the colony to additional railway expenditure.

As I gather from the words of your speech quoted above, that this view is shared by yourself, I have caused Mr. Gregory to be informed that no further steps are to be taken in regard to the plans and specifications, and have also intimated to Mr. Downall, who, at a recent interview with me, adverted to this subject, that the work will at present not be carried out.

6. At the same time, I am fully sensible of the importance of the proposed extension, and it will afford me much satisfaction if the state of the revenue should at some future time be such as to enable me to sanction its construction.

7. Mr. Downall alluded to the desirability, in the event of the line not being undertaken, of making a cart road between Haputalé and the Nánu-oya terminus. The construction of such a road would involve a large expenditure—I understood him to say eighty-thousand pounds—and I am not aware whether, if the railway were built hereafter, any further use would be found for it such as to justify the requisite expenditure; but the matter seems to me to be one which fairly deserves the consideration of your Government.

I have, &c.,
KIMBERLEY.

Enclosure No. 1.

The COLONIAL OFFICE to the CROWN AGENTS.

Downing-street, 2nd May, 1882.

GENTLEMEN,—I AM directed by the Earl of Kimberley to request you to invite Mr. Hutton Gregory's opinion upon the enclosed copy of a despatch from the Governor of Ceylon, covering a report by the Chief Resident Engineer upon the progress made in the construction of the Nánu-oya line up to the 31st of December last, which appears to His Lordship to be somewhat unsatisfactory.

2. The depressed state of the Colonial revenue is not favorable for the further prosecution of railway extension in Ceylon; but on the assumption that it may be found possible hereafter to incur the expense, I am to refer you to Mr. Gregory's letter to you dated the 16th of December, 1879, and to request that you will ask him to state at what date, in his opinion, such an extension could most effectually and economically be begun, having regard to the present rate of progress on the Nánu-oya line.

I am, &c.,
R. H. MEADE.

Enclosure No. 2.

The CROWN AGENTS to the COLONIAL OFFICE.

Downing-street, London,
29th September, 1882.

Ceylon.

SIR,—WITH reference to your letter of the 1st ultimo, requesting us to obtain from the Consulting Engineer for the Ceylon Railways an early reply to the reference made to him in May last on the subject of the proposed extension of the Nánu-oya line to Haputalé, I have the honour to forward a copy of a report from Mr. Gregory in which he states that, looking to the rate of progress made up to the present on the Nánu-oya line, the completion of that work may be expected in May, 1885. If the extension to Haputalé is to be pushed on at the earliest practicable date, its earthworks and bridge masonry should be complete by that date, so as to be ready for the permanent way materials and bridge-tops which would be transported over the Nánu-oya line as soon as it is opened. Mr. Gregory calculates that to effect this the extension works should be commenced in November, 1882, or May, 1883, at the latest.

2. The plans and specifications for this extension were prepared in detail in Ceylon, under Mr. Waring's supervision, on the model of those which he had then just assisted the Consulting Engineer to complete for the Nánu-oya contract. In March, 1881, Mr. Gregory reported that the work appeared to him to have been well done, and that all that would be necessary when the line should be sanctioned would be to have the documents printed and the plans lithographed, which could be done in about two months.

3. The experience since acquired in the execution of the Nánu-oya works renders it desirable, in Mr. Gregory's opinion, to introduce certain alterations into the plans, and he recommends that for this purpose he should, if it is decided to proceed with the extension, be allowed to employ Mr. Mosse, and thus avail himself of that gentleman's knowledge of all the details of the Nánu-oya work.

4. In these circumstances, it is not probable that the revision of the plans, the printing and lithographing could be completed under four months, which would place the date of calling for tenders at some period in the month of February next. Allowing three months for intending contractors to visit the colony, tenders would be received in May, and the contract might be signed in June, the work commencing in July, 1883, or two months later than the date at which, in the Consulting Engineer's opinion, the progress of the Nánu-oya line would justify its being taken in hand. In these circumstances, it would appear that the question of whether or not this extension is to be proceeded with, is one which calls for early consideration.

I have, &c.,
M. F. OMMANNEY.

Sub-Enclosure in enclosure No. 2.

Mr. CHAS. HUTTON GREGORY to the CROWN AGENTS.

2, Delahay-street, Westminster,
6th September, 1882.

Ceylon Government Railways.

GENTLEMEN,—I HAVE the honour to return herewith Governor Sir J. R. Longden's despatch No. 110 (Miscellaneous), dated March 8th, with its enclosures, to which I have given consideration with the view of complying with the instructions of your letter of May 6th, and particularly with the desire which is expressed in the Colonial Office letter of May 2nd—that I should state at what date, in my opinion, the extension from Nánu-oya to Haputalé, if sanctioned, could most effectually and economically be begun, having regard to the present rate of progress on the Nánu-oya line; and in considering the questions referred to me, I have availed myself of the delay which you have sanctioned, by discussing them with Mr. Mosse, who has recently returned to this country.

2. The general result of the half-yearly progress report of works up to December 31st, 1881, contained in the Chief Resident Engineer's letter No. 22, of February 11th, 1882, was certainly unsatisfactory. From the unofficial information I have from Mr. Mosse, I have reason to believe that the half-yearly report up to June 30th, 1882, which I suppose you will shortly receive, will show some improvement in the rate of progress, and I trust that the decision which I felt it my duty to give upon some of the disputed questions referred to me, and particularly that as to the character of the masonry, may lead to some improvement in the work itself; and I think it right to state that while the photographs of masonry which have been sent to this country fully support the statements which have been made by Mr. Mosse, I am quite satisfied that his efforts and those of his staff have been of great advantage in protecting the interests of the Government.

3. I still feel that it would not be safe to count upon the completion of the line up to Hatton and Nánu-oya at dates materially in advance of the contract dates of May, 1884, and May, 1885, respectively, and I therefore assume the latter date, of May, 1885, to be that at which you may expect that the line to Nánu-oya will be available for the purposes of further extension, unless unexpected difficulties should arise, particularly in the Poolbank tunnel, which may be regarded as the key to the work.

4. The course which has been adopted by the contractors in carrying out the works of the Nánu-oya line is, in one important respect, different from what had been generally anticipated, for, instead of constructing a road in the immediate neighbourhood of the railway for the purpose of hauling bridge and permanent way materials to the sites where they would be required on the railway, the earthwork and masonry have been carried on more or less throughout the whole length of the railway, and as the railway formation has been made the rails have been laid forward from the Náwalapitiya end and the materials of bridge-tops drawn over the permanent way to the piers and abutments prepared for them, the exception to this general rule having hitherto been about two miles altogether of permanent way material hauled by road to Carolina and Hatton stations.

5. We may, I think, conclude that this course has been adopted with the view of economy of construction, and, assuming that the same course is followed with regard to the extension from Nánu-oya to Haputalé, the natural time for commencing the works of construction of that extension, if sanctioned, would be such a date as would enable the earthworks and masonry to be ready for the permanent way, and bridge tops, and station materials, when the line to Nánu-oya is handed over to the Government in May, 1885.

6. I think that the earthworks and bridge masonry might be completed in a period of about 2½ years, or possibly in 2 years—which would point to November, 1882, or May, 1883, as the date of commencement which would secure the result indicated.

7. It will perhaps be right that I should here refer to a recommendation made by Mr. Mosse to the Government of Ceylon, in which I concur, that in the event of a decision to carry out the extension from Nánu-oya to Haputalé, it would be of the utmost importance at once to construct a bridle-path along the whole of the route, and bungalows for the engineers, without which the line of the work is inaccessible to either the engineers or intending contractors, and that the centre line of the railway should be at once cleared of jungle which has overgrown it and fresh stakes put in where necessary.

8. It will also be necessary that the revision of the specification and contract drawing should at once be proceeded with, with such modifications as experience of the existing work may have shown to be desirable; and having reference to Mr. Mosse's knowledge of every detail, I submit that it will be highly desirable to engage his services for the purpose of assisting me in this work, with such assistance as he may require.

I have, &c.,

CHAS. HUTTON GREGORY,
Consulting Engineer.

XXXVI.—1882.

LETTER

FROM

THE SENIOR PUISNE JUSTICE

ON

SIR J. PHEAR'S DRAFT CRIMINAL PROCEDURE CODE.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

LETTER

FROM THE SENIOR PUISNE JUSTICE

ON

SIR J. PHEAR'S DRAFT CRIMINAL PROCEDURE CODE.

The Hon. L. B. CLARENCE, Senior Puisne Justice, to Lieutenant-Governor the Hon. J. DOUGLAS, C.M.G.

Colombo, 25th May, 1881.

HON. SIR,—SIR James Longden, very shortly before leaving Ceylon, forwarded to me a copy of Sir John Phear's Draft Criminal Procedure Code, with an intimation that it was sent to me by desire of the Secretary of State for the Colonies in accordance with a wish expressed by Sir John Phear.

The topic is one of such great importance that I ask leave to address to the Secretary of State, through you, some observations which the leisure of the Easter vacation has enabled me to put together.

The eight years' experience which I have had, as Law Officer of the Crown and as Judge, of the administration of justice in Ceylon, has forced upon me the conclusion that, as matters now stand, the administration of justice is very far from satisfactory. I write *apropos* of the Draft Criminal Procedure Code lately sent me, and concerning criminal matters only. The outlook as to crime and criminal law is not assuring: our jails are crowded with convicts unjustly convicted; a large amount of crime goes unconvicted; and these results serve to stimulate and encourage the unhappy native propensity for false evidence. I have devoted a good deal of thought to this subject, and it is my wish to place before the Secretary of State my views upon certain points.

It is, I think, a matter for regret that more advantage has not been taken in Ceylon of the labours of Indian Legislators. I am, therefore, glad to see that Sir John Phear's Criminal Procedure Code is based on the lines of the Indian Criminal Procedure Code of 1872.

I.—JUSTICES OF THE PEACE.

I observe with great satisfaction that Sir John Phear's Draft Code abolishes once for all the present distinction between Justices of the Peace and Police Magistrates. It would be difficult to exaggerate the inconvenience and delay which arise under the present system. The theory of our present procedure is, that if a complainant complains of an offence triable by a Police Court, he lays his information before a Police Magistrate, but if his complaint is of an offence beyond Police Court jurisdiction, he lays his information before a Justice of the Peace. In one case the information requires a stamp, in the other not—a distinction without foundation, as far as I am aware. The charge laid before the Police Magistrate may turn out, when evidence is taken, to disclose an offence too grave for a Police Court to dispose of. In that event the "Police Court" case has to be turned into a "Justice of the Peace" case at the expense of taking fresh depositions: or it may be that the charge laid before a Justice of the Peace turns out to be a matter within Police Court jurisdiction. Still, the Justice of the Peace cannot dispose of it as a Police Magistrate, but can only commit for trial before a Police Magistrate,—in all probability himself.

The way out of all this delay and inconvenience lies plainly open. Let all criminal charges be preferred in the first instance before a Police Magistrate. If, when the evidence is completed, the Magistrate finds that it discloses an offence which can be adequately punished by such punishment as he can inflict, he should convict and pass sentence. If, on the contrary, the evidence when completed discloses an offence demanding a heavier punishment than a Police Magistrate is empowered to inflict, the Magistrate should, upon the depositions which he has taken, commit the accused for trial before the District Court or the Supreme Court, as the case may be. Whatever be the "criminal dimensions" of the offence with which the private informant charges the accused, if the evidence recorded by the Magistrate discloses nothing more than an offence within Police Court jurisdiction, the Magistrate should have power to dispose of the matter then and there, subject, of course, to appeal to the Supreme Court. Native complainants in this Island exaggerate their complaints immoderately, in the hope of obtaining the heaviest possible punishment for the accused, or, at all events, of subjecting him to the pains, delay and expense of a District Court or Supreme Court committal and trial. Numerous charges are instituted under the present system before Justices of the Peace in which the *substratum* of truth, when there is any, is some trivial matter well within the jurisdiction of a Police Court. In Sir John Phear's Draft Code this separate jurisdiction, I am very glad to see, finds no place.

II.—Payment of Witnesses.

There is a matter not noticed in the Draft Code which ought to be provided for in reconstructing the Administration of Criminal Justice, viz., the payment of witnesses. Native witnesses are paid at a considerably higher rate in Ceylon than in India, perhaps because prices are so much higher in the Island than on the neighbouring continent; but in India witnesses in all the courts may receive an allowance for their expenses, whereas in Ceylon witnesses get paid only when the trial is in the Supreme Court. I see no reason why witnesses in the District Court should not also be paid. Many native villagers are scarcely able of themselves to provide the means of several days' subsistence away from home; and I do not know of any reason why—if a witness in the Supreme Court in a case of house-breaking or arson is paid by the State—the same aid should not be extended to a witness in the District Court in a case of cattle stealing.

III.—Trial by Jury.

I observe that Sir John Phear's Draft Code makes very little alteration in the present system of trial by jury. My experience as Public Prosecutor and as Judge of the Supreme Court has forced upon me the conviction that the present system of trial by jury in Ceylon largely produces miscarriage of justice. This conviction I know to be shared by a large number of those whose experience entitles their opinion to respect. As long ago as 1870, Mr. L. Liesching, now Fiscal of the Western Province, then a District Judge, a gentleman of much experience and acuteness, recorded in his annual report his conviction that in Ceylon trial by jury is worse than useless.

I know of no more difficult task than the decision of issues of fact in a country where false testimony prevails to a proverbial extent; where witnesses come forward to vouch for a partisan story, rather than to tell the results of their own observation; where precision of observation with regard to time and distance is quite unknown to a large proportion of witnesses, and where a great quantity of witnesses can scarcely realize any difference between personal observation and hearsay. Without unflagging attention and a thorough knowledge of the people no one, judge or juror, can hope to be fairly successful in decision. It goes without saying, that the juror should be strictly and inexorably honest in the sense of deciding without fear or favour, and there is a further kind of honesty required of a juror,—an honesty in sparing himself no effort to unravel the truth.

Trial by jury was introduced into Ceylon about 1810. Seventy years have been quite sufficient to test its efficiency when transplanted to this Eastern Island. It has proved a failure. It was natural and laudable that Englishmen, recognizing the inestimable value of Trial by Jury in their own land, should wish to extend the same benefits to the inhabitants of their Eastern dominions; but here the wish ran in advance of possibility. Mr. Herbert Spencer ("*Social Statics*") upon this very subject has well said:—

> "To be of use, this, like other institutions, must be born of the popular character. It is not trial by jury that produces justice, but it is the sentiment of justice that produces trial by jury, as the organ through which it is to act; and the organ will be inert unless the sentiment is there."

In Ceylon the "organ" is worse than inert: it produces injustice.

I do not undervalue the good qualities of the natives of Ceylon. On the contrary, I appreciate them in a higher degree, probably, than the bulk of Europeans resident in the Island; but I cannot disguise from myself that the "sentiment of justice" spoken of by the author of the passage just cited does not exist among them to that extent which would render a native jury a successful means to the end of justice. And when it is borne in mind that among the Siṇhalese, Tamils and "Moormen" of Ceylon litigation is almost a national pursuit, false accusations are a favourite weapon of offence and defence, and that false testimony teems in the cases presented to the courts for adjudication, it is hardly surprising that this should be so. The wonder would be were it otherwise. Add to this that it is not merely honesty in the sense of impartiality that is required of a jury, but something more, viz., that vigorous determination to arrive at the truth, if possible, which is a remarkable characteristic of juries in England, and the capacity and the will to comprehend the various points offered by each case, to appreciate the observations of counsel, and, above all, those of the judge. In these respects, also, native jurors in Ceylon are in a large degree deficient.

Some years ago the practice of having a Criminal Session of the Supreme Court at the important town of Kalutara, midway between Colombo and Galle was discontinued for the significant reason that it was found impossible to obtain impartial juries.

I suppose that most people in England, on learning that in Ceylon the graver criminal charges are tried by jury, would infer that this means trial of each accused by his peers. The inference would be natural, but it would not be borne out by facts. We have, for instance, Siṇhalese men tried by juries of Europeans, Eurasians, Tamils and Moors. The Siṇhalese jury for Siṇhalese accused, or the Tamil for Tamils, are very little used. This is not trying men by their peers, but by a statutory tribunal composed of thirteen judges of fact. The tribunal might, nevertheless, be a justice-producing tribunal; but, in my experience, it is not.

The only criminal charges tried by jury are the graver charges, which are tried before Judges of the Supreme Court; that is to say, all charges too grave to be disposed of by the District Judges, whose punitive powers are limited to one year's imprisonment at hard labour, Rs. 1,000 fine, 50 lashes, or any two of these punishments together. The District Judges may invoke the aid of assessors. Supreme Court trials take place before a Judge, with a jury of thirteen, the verdict of a majority of the jury being accepted.

I learn from an examination of the older Supreme Court Minutes, that in the earlier days of trial by jury in Ceylon, juries of particular nationalities and even of particular castes used to be empannelled; for instance, a jury of "Burghers" (Eurasians) or a Siṇhalese jury of the Vellála

caste or of the fisher caste. My memory does not recall any instance of a jury of one of the lower castes being empannelled—such for instance, as the jaggery caste; and, indeed, such a jury would probably be so incapable of reasoning on evidence and so patently unendowed with the "sentiment of justice," that to empannel it would be an obvious mockery of justice. It is probable that these older juries were empannelled according to the nationality or caste of the accused. The practice, however, did not survive, and for many years juries have been drawn, as they are now drawn, under the Administration of Justice Ordinance, 1868, from three panels, viz., a panel of "English-speaking jurors," a panel of "Siṇhalese-speaking" jurors, and a panel of "Tamil-speaking" jurors. The "Siṇhalese-speaking" and the "Tamil-speaking" panels are composed purely of natives, but the "Tamil-speaking" panel are not by any means all Tamils. The "Tamil-speaking" jury are usually, save in the Northern Province, mainly or wholly composed of "Moormen," a race whose language is Tamil.

For the sake of shortness, I shall henceforth speak of these three panels as the "English," "Siṇhalese" and "Tamil" panels.

The "English" panel varies very considerably according to circumstances and locality. In the "planting districts" it is composed almost entirely of European coffee planters. In other places it is a mixture composed of a few Europeans and a larger number of Eurasians and of natives (Siṇhalese, Tamil and Moorish) supposed by the Fiscal to understand the English language. Sometimes the "English" jury has not a single European member.

The employment of the "Siṇhalese" and "Tamil" juries has decreased of late years, and at the present date "Siṇhalese" and "Tamil" juries are empannelled in a very small number of cases only. This will appear from the following table, compiled, by the selection of a few years at random, from the Supreme Court Minutes:—

Trials by Jury.	Western Circuit.	Midland Circuit.	Southern Circuit.	Northern Circuit.	Total.
		1845.			
English	7	7	9	2	25
Siṇhalese	35	27	24	3	89
Tamil	1	0	0	29	30
		1846.			
English	9	3	27	7	46
Siṇhalese	10	25	2	4	41
Tamil	4	0	0	17	21
		1850.			
English	21	28	30	14	103
Siṇhalese	3	35	6	10	54
Tamil	6	3	0	11	20

[The Kalutara Session having been discontinued, all Western Circuit cases came to Colombo.]

Trials by Jury.	Colombo Session.	Midland Circuit.	Southern Circuit.	Northern Circuit.	Total.
		1860.			
English	36	60	33	16	145
Siṇhalese	0	0	6	3	9
Tamil	0	0	1	7	8
		1870.			
English	44	60	37	18	159
Siṇhalese	9	10	1	4	24
Tamil	3	2	3	3	11
		1872.			
English	51	86	36	15	188
Siṇhalese	5	3	1	3	12
Tamil	3	1	2	7	13
		1880.			
English	247	139	57	63	506
Siṇhalese	10	14	13	3	40
Tamil	3	7	1	0	11

Theoretically, according to the provisions of the Ordinance No. 11 of 1868, the Queen's Advocate and the accused should settle between them from which panel ("English," "Siṇhalese," or "Tamil") the jury is to be drawn, the judge deciding in the event of the Queen's Advocate and the accused not agreeing. In practice, the selection of the prosecuting Deputy to the Queen's Advocate is, in the large majority of cases, unchallenged. Of late years the "Siṇhalese" and "Tamil" juries have been little used at the Colombo Criminal Sessions, except on "mail-days," in order to release the European jurors serving on the "English" panel.

I have already described the deficiencies of the purely native juries in the sentiment of justice and in judicial capacity. There is always the danger of a verdict being due to partisanship or class feeling; and even when impartial, the attitude of native jurors is too often that of a servile anxiety to discover what the judge wishes them to find, rather than a vigorous determination to discover the truth by the judge's aid. The same considerations apply in a scarcely diminished degree to the bulk of the native jurors on the "English" panels. The Eurasian jurors on the English panels seem also, upon the whole, deficient in moral stamina and judicial capacity. With regard to the Eurasians, it is notoriously difficult, even upon the strongest evidence, to induce a jury, in which Eurasians are in a majority, to convict an Eurasian. I shall not readily forget the mortification I have experienced at certain miscarriages of justice of this class. With native jurors, also, it is difficult to obtain a conviction where the accused is a person of position or influence.

A further great drawback to the efficiency of the "English" jury arises from the fact of there being no sufficient guarantee that the numerous native jurors who sit on the English-speaking jury really do understand English well enough to follow proceedings conducted in English. The evidence, or such of it as is given by native witnesses, they may very probably be able to follow: the Siṇhalese jurors will, at any rate, understand the Siṇhalese witnesses, and similarly with regard to the Tamils. But it hardly needs to be said that each juror should be able to understand the summing-up and the directions of the judge. My belief is—and it is shared by those whose experience enables them to judge—that a large number of the so-called "English-speaking" jurors do not understand enough of the English language to enable them to follow proceedings in English, and that the observations addressed to them are sometimes entirely misunderstood. It is natural that this should be so. To appreciate correctly, for instance, a judge's directions and summing-up needs an accurate knowledge of the language in which the judge is speaking. The Fiscal, whose duty it is to make out the jury lists, has no means of ascertaining whether the Siṇhalese, Tamils and Moormen whom he places on the "English-speaking" list possess the requisite knowledge. At most, a native man is usually placed on the "English" list, because he is known to fill some office or employ which requires that he should be able to communicate in English to some extent with those who employ him. But a man may speak a foreign language fluently so far as is necessary for transacting some particular class of business, and yet be very far indeed from being able to follow a train of reasoning in that language *dehors* the scope of his usual employment. To take an instance of familiar occurrence: many Italian and German innkeepers speak English and French well for all purposes of ordinary hotel conversation, who are yet "at sea" when taken on to some other topic, and who would be quite unable to follow a train of close reasoning on another subject. There is grave reason for believing that many of the native members of the "English" juries do not follow the proceedings which take place in the English language, including what it is most important that they should fully understand—the judge's directions and summing-up.

Passing now to the European jurors on the "English" juries, the deficiency with them is in the requisite knowledge and experience of the people. For instance, Colombo merchants and their European employés have not, as a rule, the acquaintance with the people and the country which would enable them to appreciate properly the testimony adduced in the bulk of the cases which they have to try. I have been told by a leading Colombo merchant:—"There is no duty which I dislike more than serving as a juror here. The time, of course, is an object to me, but it is not merely that; I have not the satisfaction of knowing that in return for my expenditure of time I am doing justice. My experience does not enable me to be a good judge in these native cases." Not infrequently it happens that the European members of an "English" jury are young men freshly arrived from home and totally without experience of the people among whom they are called upon to judge.

There is one "English" jury, which is an exceptional one, and that is the jury in the "planting districts," already mentioned. At Kandy and at Badulla the bulk of this panel are coffee planters, and thus the jury very often is composed, to a man, of Europeans. This "planter-jury" is a very intelligent one, and an impartial one to boot, bating perhaps a certain inclination to convict on indictments for coffee-stealing, without which a "planter-jury" would be almost more than human. In point of mental capacity and vigour and of moral character, this jury is, in fact, equal to a special jury. Where the parties concerned in a case are Tamils, the "planter-jury" is by no means an unsatisfactory tribunal; they understand the Tamil language, and they are accustomed to have to do with Tamils. But when the case is a Siṇhalese one, it is otherwise. The planters have not the same experience of the Siṇhalese villagers; and in the ordinary village charges preferred by Siṇhalese against Siṇhalese they are not good judges of the evidence. I have seen very unjust (though honest) convictions in Siṇhalese cases by the "English" jury in the planting districts.

With respect to this "planter-jury" there is a further inconvenience (to put the matter gently) when the crime charged is that of coffee-stealing. A Siṇhalese man charged with stealing coffee from a European planter naturally dislikes being tried by a jury of European planters. If, on the other hand, the judge accedes to a request of the accused for a Siṇhalese jury, the planters, not unnaturally, complain on their side.

To sum up:—Trial by jury in Ceylon is not trial of the accused by his peers, and for the rest the system is not efficient in the production of just verdicts. It adds many chances of escape in favour of a rich or influential criminal, and is too much of a lottery in ordinary cases. The evils of a criminal tribunal which is not successful in the production of just verdicts can hardly be overstated. They extend far beyond the individual injustice in the case of each criminal unjustly absolved, and each innocent accused unjustly condemned. Lawless insecurity is bad enough, but insecurity under the mask of law is worse. Those inclined to crime find their inclination stimulated by the chance of an unjust acquittal; the national propensity for false evidence is fostered by its frequent success; and conviction and sentence lose much of their disgrace, and consequently, of their deterrent force, where it is notorious that a large number of convictions are unjust.

I have not adverted to the complaints which are made by the non-official European community of the inconvenience which they undergo in so frequently being compelled to serve on the "English" juries which try so large a proportion of the Supreme Court indictments. The English merchants, who find themselves and their clerks frequently compelled to attend day after day as jurors at the heavy Colombo Criminal Sessions of the Supreme Court, complain of the burden; and still more so the coffee planters, who are compelled to travel, it may be long distances from their estates, to Kandy or Badulla, to serve for ten days, perhaps in crop-time, on a jury at the Supreme Court Criminal Sessions. I say nothing on this head, because England holds Ceylon

subject to the obligation of administering justice amongst the native inhabitants; and if it be expedient in the interests of justice that the European residents should discharge this duty, discharge it they should. There is however, perhaps, some hardship on the non-official and unpaid European residents in having so large a share of the administration of justice thrown upon their shoulders. But my objection to the system is its inefficiency.

I have heard it said: "Trial by jury is no doubt a failure here, and inefficient; but it has been so long in vogue, that it is not advisable to meddle with it." I cannot appreciate that reasoning. The tribunal once shown to be inefficient, and given also that a better can be devised, humanity and justice demand that the change be made as promptly as possible.

The next consideration is :—If the present system be condemned, what is to be substituted for it? I see no great difficulty there. Turning to the Indian Criminal Procedure Code of 1872, we find (omitting minor details) that the graver crimes, such as would be disposed of here in the Supreme Court, are tried by the Court of Session. Such cases may, however, be tried in the High Court, and where the accused is a European British subject, and the offence charged is one punishable with death or transportation for life, the trial must be in the High Court. All High Court trials are conducted with a jury of nine jurors, but the judge has certain powers of disagreeing from a verdict and discharging the jury. Trials in the Court of Session are before a judge and assessors, the judge having certain powers of dissenting from the assessors' verdict, in which event the case goes before the High Court as upon an appeal. The Code, however, reserves power to the Government to introduce trial by jury locally by proclamation; and by such proclamations local governments are empowered to restrict the trial by jury so introduced to the trial of specified offences, to confine its operation within defined local limits, and to prescribe the number of jurors. In various localities trial by jury has been so introduced, the jury varying, I believe, in number from five to nine. In the Madras Presidency, for instance, I learn that in seven out of twenty-one districts trial by jury has been so introduced for the charges of trial of robbery, gang-robbery, house-breaking, theft, and guilty receipt of stolen property, by a jury of five jurors. I learn also that the results have scarcely been such as to dispose the Madras Government to any further extension of the jury system.

While I recommend the abolition of the present jury system in Ceylon, I think it desirable that the judges, having to deal with much native evidence, should have some assistance, and I think that this end might be attained by associating with the judge, after the Indian plan, a small number (say three) of assessors. I would reserve to the judge the power of dissenting from the opinion of the majority of the assessors, or even of the assessors when unanimous; but in that event the case should come before at least two judges of the court as by way of appeal. The assessors, being fewer in number than the present jury, might be chosen from a more intelligent and better educated class.

If it be thought better to retain the jury, the number of jurors might advantageously be decreased, and the qualification raised; but I would certainly recommend that a power be reserved to the judge of dissenting from the verdict, and either discharging the jury or submitting the case as upon an appeal to other judges of the Supreme Court. The power of dissenting from the verdict of a jury is one which a judge would naturally be disinclined to exercise, but cases occur in which its exercise would be salutary; and I have been obliged to give effect to verdicts, some perverse and others merely mistaken, from which I certainly should have dissented had I possessed the power.

Having made the foregoing recommendations, I will add that if I consulted only my own personal pleasure as a judge, either of the suggested alterations would be unwelcome, as increasing weightily the responsibility of the judge; but writing conscientiously, with the wish that the administration of justice may be improved, I am sure that something in the nature of what I have suggested would work infinitely better than the present system.

IV.—Judicial Appointments.

I sincerely trust that before long Ceylon may be placed in possession of a thoroughly good Code of Criminal Procedure, as well as a good Code of Substantive Criminal Law, in addition to those reforms which are needed on the civil side of our law. But I am unwilling to close this letter without pointing out that to ensure the successful administration of justice something is required beyond good procedure and substantive law,—and that is, the needful ability in the judiciary of all grades. Judicial appointments at large throughout the Island are not filled by the best talent in the Civil Service. I will not go the length of saying that the highest talent in the Service should be always drafted into the judicial line, but I will say that the judiciary should obtain its fair share of the available talent. At present, and for some time past, the administration of justice has suffered for lack of strength in many of the inferior courts. Gentlemen whom the Government deemed unfit to be entrusted with work in a Kachchéri have been appointed judges of first instance, as Justices of the Peace, and Police Magistrates, and Commissioners of Requests, and even District Judges. In some instances such offices have been filled by the appointment of gentlemen, not members of the Civil Service, and possessed of no judicial qualifications whatever. I desire here to guard against being supposed to charge with incompetence all those gentlemen, not members of the Civil Service, who have held appointments in the judicial line. I make no such universal charge, but the administration of justice has suffered grievously from being committed to the hands of gentlemen who, whatever good services they might have been able to render in some other office, were quite incompetent in a judicial capacity. Similarly, I wish to guard against being supposed to make any universal charge against the members of the Civil Service employed on judicial duty. I value highly the work of some Civilian judges of first instance, at the same time that I deplore the mischief which has resulted at the hands of incompetent civilian

judges. A general belief exists, which cannot be said to be without foundation, that the Government of Ceylon regard judicial work as work which may fitly be entrusted to those whom the Government will not venture to entrust with other work—that, in the estimation of the Government, almost anybody is good enough to be a Police Magistrate or Commissioner of Requests. Such a belief naturally serves to degrade judicial work in the estimation of the Civil Service.

I have heard it said, in justification of the retention of an incompetent person in judicial office :—" Oh ! the Government look to the Supreme Court to keep all those people straight !" A greater fallacy can hardly be imagined. An Appeal Court can reverse erroneous decisions on points of law, can quash irregular proceedings, and can send cases back for new trial where the investigation in a court of first instance has been imperfect ; but no Appellate Court can remedy or undo the mischief occasioned by weakness in courts of first instance.

The employment of the members of the Civil Service falls into two main divisions, known as the revenue and the judicial branches. In the course of a few years a young man, after partaking of both employments, usually finds himself settled in one or the other branch. It is well known that all who can secure that object contrive to get into the revenue branch, and that to be detained in the judicial line is regarded by the younger members of the Civil Service as a misfortune. The reasons of this appear to be two-fold. To one of them I have already adverted. The other is the poor prospect of promotion held out by the judicial branch. On the revenue side of the Service, a young man feels that he may attain to the Agency of a Province or one of those offices which confers a seat in the Executive Council. On the judicial side the prospect is far inferior: beyond the District Judgeship of Galle, there seems, according to present traditions, nothing to which the civilian can aspire. In my opinion it should be open to a member of the Civil Service who embraces the judicial branch to look forward to becoming District Judge of Kandy or Colombo, and, ultimately, a Judge of the Supreme Court. I should be very pleased to see one civilian judge upon the Supreme Court Bench. If a civilian may be a judge of the Indian High Courts, I know no reason why he might not also be a judge of the Ceylon Supreme Court ; and, for an instance of what a civilian judge may be, we need only recall the career of Mr. Justice Holloway, who lately retired from the Bench of the Madras High Court,—a judge who would have been an ornament to Westminster Hall. Let it only be understood that the highest judicial offices in the Island are open to the Civil Service, and better talent will seek the judicial branch.

The Registrarship of the Supreme Court, if recognized as a stepping-stone to the higher judicial appointments, and perhaps somewhat increased in pay, would be a very valuable school for civilians aspiring to the higher judicial appointments. At present, the Registrar of the Supreme Court receives but Rs. 6,000 a-year, with no prospects whatever of promotion, and this is not enough to tempt a man capable of properly discharging the duties of the office. If Sir John Phear's Criminal Procedure Code should become law in its present form, it will be necessary that the Registry of the Supreme Court should comprise, at least, one officer capable of drawing indictments.

I am sorry that these observations have run to so great a length. The importance of the subject needs no comment, and the present occasion is a grave one.

I have, &c.,

L. B. CLARENCE,
Senior Puisne Justice.

XXXVII.—1882.

COLOMBO HARBOUR WORKS LOAN BILL.

REPORT of the SUB-COMMITTEE of the LEGISLATIVE COUNCIL appointed to Report upon the Bill intituled "An Ordinance for the raising by Debentures of a further sum of £150,000 sterling for the improvement of the Harbour of Colombo."

Ordered by the Legislative Council to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

EXTRACT from the Minutes of the Legislative Council, dated 11th October, 1882.

Resolved,—That the following gentlemen be appointed a Sub-Committee to report upon the Bill intituled:

"An Ordinance for the raising by Debentures of a further sum of £150,000 sterling for the improvement of the Harbour of Colombo."

The Hon. J. DOUGLAS, C.M.G., Colonial Secretary.
The Hon. F. R. SAUNDERS, Government Agent, Western Province.
The Hon. J. STODDART, Acting Surveyor-General.
The Hon. W. W. MITCHELL.
The Hon. F. M. MACKWOOD.
The Hon. A. L. DE ALWIS.
} Unofficial Members.

COLOMBO HARBOUR WORKS LOAN BILL.

REPORT.

THE Sub-Committee appointed to consider the draft of "An Ordinance for the raising of a further sum of one hundred and fifty thousand pounds sterling for the improvement of the Harbour of Colombo" have felt it their duty to give very careful consideration to the financial aspect of the question of the Colombo Breakwater, which does not appear to have been as yet placed fully before the Council.

The resolution of the Council limiting the expenditure upon the Colombo harbour works to a sum of £800,000 was arrived at upon the anticipation that a revenue of Rs. 432,182 could be raised from a scale of harbour dues similar to that recently brought into operation, and that this amount would suffice to cover the charges in respect of a debt of £800,000, as well as the maintenance charges which have to be defrayed from the harbour revenue. This, however, the Committee regret to find is not the case.

The estimate of receipts from the new scale of port dues has been seriously modified by the decrease which has taken place in the imports and exports of the Colony since the year 1879, when that estimate was framed. The Acting Collector of Customs has, in Sessional Paper XXXI. of 1882, expressed his belief that these dues will produce no more than Rs. 295,000, while a careful revision of the returns by the Chamber of Commerce has satisfied that body that the probable revenue may safely be placed at Rs. 353,000.

Adding to this latter figure, which the Committee have resolved to adopt as the basis of their calculations, the receipts from pilotage—say Rs. 30,000—and the rents derived from the leases of the lotus pond reclamation—about ten acres of which have been rented out by Government for a sum of Rs. 5,000 annually, and should be credited to harbour revenue, the cost of the reclamation having been defrayed from breakwater funds—a total harbour revenue is arrived at amounting to Rs. 388,000.

The charges which would have to be met from harbour revenue in respect of an expenditure of £800,000 upon the breakwater would, under Ordinance 2 of 1876, be as follows :—

(1) The annuity or annuities upon a loan of £250,000 from the Public Works Loan Commissioners	£13,300
Interest at 4½ per cent. upon a loan of £200,000 raised in 1875 ...	9,000
Interest on further loans of £350,000, at 4 per cent.	14,000
	£36,300

Or, at 1*s.* 8*d.* to the rupee = Rs. 435,600

Adding to this the annual amount required "for the maintenance of the works and for defraying such charges as may be incidental to the efficient management, pilotage, and lighting of the port," as to which no reliable information is as yet available, but which cannot be estimated at less than Rs. 50,000, a total annual charge is arrived at of no less than Rs. 485,600 in respect of an expenditure of £800,000 only upon the breakwater, or Rs. 97,600 in excess of the gross harbour revenue. Such a sum could not, in the opinion of the Committee, be raised by dues upon the existing trade of the Port of Colombo.

It therefore becomes unnecessary for the Committee to enter upon the question of the construction of a northern arm. It is probable that a not unimportant reduction could be made in Sir J. Coode's latest estimate for a complete harbour scheme—£903,000; but the estimated cost would still be in excess of any sum which can at present be provided for from harbour revenue. The Committee therefore recommend :—

(1) That for the present the southern arm only be constructed, in accordance with Sir J. Coode's design B., the estimated cost of which is £707,000.

(2) That the cement capping for the southern arm, estimated to cost £15,000, which is reported by Sir J. Coode not to be essential to the stability of the structure, be omitted.

(3) That the Draft Ordinance conferring borrowing powers in addition to the loans of £650,000 already authorized be not proceeded with pending a decision whether the remainder of the money required should not be raised in the open market in preference to having further recourse to the Public Works Loan Commissioners.

The Committee trust that the cost of the southern arm may be kept below the sum of £650,000 already authorized, and for the following reasons :—

(*a*) The omission of the cement capping will reduce Sir J. Coode's estimate from £707,000 to £692,000.

(*b*) The rates upon which Sir J. Coode's estimate is based for the work to be done during the current and the coming seasons are the average rates for the whole time during

which the work has been in progress—not the lower rates secured during the past two years. The satisfactory progress made with the breakwater during the present season justifies the expectation that these lower rates will be maintained till the completion of the work, and a large saving be thereby effected.

(c) The breakwater has a claim against the railway, amounting to Rs. 240,000, in respect of alleged over-charges for the carriage of materials. The claim is, however, in dispute, and would, if admitted, have to be met from general revenue.

The Committee are informed by Mr. Kyle that the probable amount to be realized after the completion of the work by the sale of surplus stores and materials not required for its maintenance, will be not less than Rs. 250,000. The proceeds would, of course, be applied in reduction of the cost of the work; but they are strongly of opinion that no plant or materials which would be required in the event of a further extension of the works should be disposed of, in view of the possibility of its being decided hereafter that such an extension should be undertaken.

The Committee have been impressed with the statement in Sir J. Coode's recent report, that if the works were deferred for a year or two the additional cost would be from ten to fifteen thousand pounds.

Assuming that the expenditure upon the breakwater will amount to £650,000, the charges to be met from the harbour revenue will be as follows:—

Annuities on £250,000 borrowed from the Public Works Loan Commissioners	£13,300
4½ per cent. interest on £200,000	9,000
4 per cent. on £200,000	8,000
	£30,300

or Rs. 363,600; and, adding to this Rs. 50,000 for current charges, a total is arrived at of Rs. 413,600, which is still Rs. 25,600 in excess of the estimate of the gross harbour revenue.

If the recommendation of the Committee be followed, that the remainder of the money required be borrowed in the open market, the burthen on the harbour revenue will be reduced by about Rs. 19,000, and the equilibrium will be nearly restored.

One point connected with the figures given in this report for the annual harbour charges requires some explanation. It had been understood at the outset, and has been assumed in all previous calculations submitted to the Council, that the harbour revenue would be chargeable with the interest only upon the loans raised for breakwater purposes, the whole of the sinking fund being borne by the general revenue. This is the case, however, in respect only of the loans raised in the open market, while in each of the Ordinances passed upon the subject (4 of 1874, 6 of 1875, and 2 of 1876) it is provided that the whole of the annuity or annuities required to pay interest and sinking fund upon the debt to the Public Works Loan Commissioners shall be charged against the harbour revenue. The extra charge thus created against that revenue will amount to £4,550, or Rs. 54,600 if the entire sum of £250,000 be borrowed from this source. And as the borrowing powers conferred by the Ordinance have been already exercised to the extent of £125,000, its provisions can hardly now be modified.

On the other hand, there have already been paid from general revenue sums amounting to Rs. 969,827 for interest, and Rs. 24,000 for sinking fund on account of the breakwater debt during the construction of the work.

J. DOUGLAS.
F. R. SAUNDERS.
J. STODDART.
W. W. MITCHELL.
F. M. MACKWOOD.
A. L. DE ALWIS.

Legislative Council Chamber,
Colombo, 13th February, 1883.

APPENDIX.

The Hon. W. W. MITCHELL to the CHAIRMAN of the Sub-Committee on the Colombo Harbour Works Loan Bill.

Colombo, 22nd January, 1883.

SIR,—I HAVE the honour to enclose a list of questions relating to the Harbour Works, and to request that answers to them may be obtained from the Resident Engineer before the meeting of the Sub-Committee of Council on the Colombo Harbour Works Bill, on the 26th instant.

I have, &c.,
W. W. MITCHELL.

LIST of Questions, Answers to which, it is requested, may be obtained from the Resident Engineer.

What amount of saving on Sir J. Coode's estimate would be effected:—

(1.) If the lighthouses at the ends of the Southern and Northern Arms were omitted, lights being provided as at present?

(2.) If the lighthouse jetties in 40 feet of water were omitted?
(3.) If the concrete capping on southern and northern arms were omitted?

In addition to the above, it is requested that replies be obtained from the Resident Engineer to the following questions:—

4. What would you estimate the entire plant will be worth when the work is completed, assuming that the northern arm is not delayed?

5. What is the estimated value of the reclamation proposed by Sir J. Coode towards the Pettah?

6. What amount would be paid to the railway for conveyance of material if the northern arm were constructed?

7. Has Sir J. Coode, in his latest estimate for a northern arm, reckoned his prices based upon present actual cost—the average of the last 4 years—or the average cost from the commencement?

8. Assuming that the lengthening of the southern arm would give the necessary complete protection, how much longer would it require to be than Sir J. Coode's projected southern arm?

9. What depth of water would such extension terminate in, and what would be the cost of such extension?

10. Is there greater disturbance now in the water in the inner harbour than there was in the north-east monsoon before the breakwater works were commenced?

11. What was the cost of construction of the Mahara quarry line, and the line from the Fort to the Wharf?

The Hon. the COLONIAL SECRETARY to the Hon. W. W. MITCHELL.

Colombo, 2nd February, 1883.

SIR,—WITH reference to your letter of the 22nd ultimo, I am directed to acquaint you that Mr. Kyle has been requested to furnish replies to questions 4, 5, 6, 10 and 11.

As regards the other questions, a reference will be made to the Consulting Engineer.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

The RESIDENT ENGINEER, Harbour Works, to the Hon. the COLONIAL SECRETARY.

Colombo Harbour Works,
February, 1883.

SIR,—IN reply to your letter No. 18, of the 2nd instant, I have the honour to append answers to the Hon. W. W. Mitchell's queries.

(No. 4).—I estimate the value of the breakwater plant, lands, &c., &c., at the completion of the north arm (provided that work is started at once) at Rs. 941,450. For your information I annex details of the same.

(No. 5).—I estimate the cost of the reclaimed foreshore proposed by Sir. J. Coode towards the Pettah, (containing 14 acres,) at Rs. 20,000 per acre =Rs. 280,000.

(No. 6).—I estimate the amount which would be paid to the Ceylon Government Railway for material for the north arm at Rs. 143,750,—*i e.*, 230,000 tons at 62½ cents; but should the Government instruct the railway to carry *without profit*, I estimate the cost at about Rs. 80,000.

(No. 10).—I am of opinion that the disturbance in the inner harbour is now greater during the north-east monsoon than it was before the works were commenced.

(No. 11).—The Breakwater and Mahara branch lines cost this Department Rs. 212,218 and Rs. 71,078, respectively. The Breakwater branch was constructed at breakwater cost from the points near the Maradâna bridge to the points inside the tunnel in Galle Buck.

I am, &c.,
JOHN KYLE,
Resident Engineer.

DETAILS REFERRED TO.

Particulars.	Cost.	Valuation.
Breakwater and Mahara branch railways and lands	Rs. 295,769	Rs. 233,104
Buildings at Mahara and Galle Buck	73,098	21,403
Locomotives	313,530	116,047
Floating plant	470,257	103,150
Cranes (steam and hand)	40,867	7,696
Blockmaking and setting machinery	265,199	27,970
Workshops machinery	33,066	8,267
Spare gear, general stores, &c. (exclusive of consumable stores)	88,006	18,813
Reclaimed lands, at Galle Buck and root of breakwater, (15 acres)	—	75,000
Lotus Pond foreshore, (16½ acres)	330,000	330,000
		Total—Rs. 941,450

COLOMBO HARBOUR WORKS *in account with* CEYLON GOVERNMENT RAILWAY *for transport of Stone, Gravel, &c., from* 1874 *to* 1882, *inclusive, showing profit made by the Railway out of Breakwater Department as per Administration Reports for the respective years and Estimate for* 1882.

Year.	Tons carried.	Train miles run.	Cost per train mile.	Working Expenses, Ceylon Government Railway.							Receipts, Ceylon Government Railway.	Profit and Loss.		Extra profit by Ceylon Government Railway for use of Breakwater Locomotive and Van. Cost Rs. 4,061 0 36.
				Maintenance.	Locomotive.	Repairs.	Traffic.	Police.	General.	Total.		Loss.	Profit.	
			Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts	Rs. cts	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	
1874	993	—	—	308 0	336 0	—	100 16	—	—	744 16	744 16	—	—	—
1875	18990	5731	2 69	4645 2	5797 0	—	2579 0	2383 0	—	15404 2	13578 60	1825 42	—	8 months at 10·2 per cent. per annum—Rs. 2761 50
1876	62599	14314	2 17	9590 0	13884 0	600 0	2720 0	3672 0	560 0	31026 0	35866 0	—	4840 0	4-5th year at 10½ per cent.—Rs. 3411·26
1877	61489	17276	1 28	6347 0	8048 0	—	3157 0	3572 50	924 0	22048 50	39217 71	—	17169 21	1 year at 12·1 per cent—Rs 4913·85.
1878	59063	13174	1 54	9750 0	3684 19	—	3501 67	2330 47	1050 0	20316 33	36608 0	—	16291 67	1 year at 10·66 per cent.—Rs. 4329·6.
1879	39528	8580	2 45	9316 74	6864 80	1448 44	840 0	2340 0	250 0	21059 98	23846 0	—	2786 2	1 year at 9 per cent.—Rs.3654·93
1880	81365	16782	1 48	5318 67	14357 13	125 0	3158 29	1132 49	738 92	24830 50	49564 0	—	24733 50	308-313th year at 8 1 per cent.—Rs. 3236 89
1881	143535	32764	1 31	17646 0	119803 79	828 73	2809 92	1092 70	836 0	43017 15	89717 0	—	46699 85	Nil.
1882	[Profit for 1882 calculated in same proportion to "Tons carried" as in the previous year, 1881]									—	—	—	46119 0	Nil.
												1825 42	158639 25 1825 42	Rs 22307·49
												Profit	156813 83	Rs. 156813·83
													Gross profit	Rs. 179121·32

Ton Mileage.

To and from Mahara
" 5th mile.
" Kelani

Cost and Valuation of Breakwater Plant, Lands, Buildings, &c.

Description.	Cost.	Total.	Proportion.	Valuation.
Railways.	Rs.	Rs.		Rs.
Breakwater Branch	212218		Full	212218
Mahara	72786		$\frac{1}{4}$	18195
		285004		
Lands.				
Mahara quarry	10765		$\frac{1}{4}$	2691
		10765		
Buildings.				
Workshops	22489		$\frac{1}{4}$	5622
Offices, Quarters, &c.	11625		$\frac{1}{4}$	2906
Cement store	18908		$\frac{1}{4}$	4727
Mahara offices, &c.	12556		$\frac{1}{20}$	628
Master Attendant's boatshed, pilots' quarters, &c.	7520		Full	7520
		73098		
Locomotives, &c.				
2 railway locomotives and vans ...	81221		Full	81221
4 yard locomotives	58299		$\frac{1}{4}$	14575
50 iron wagons	117214		$\frac{1}{8}$	14651
26 wooden waggons	32793		$\frac{1}{8}$	4099
Block trollies	17292		$\frac{1}{16}$	1081
Small trollies	5228		$\frac{1}{16}$	327
Earth wagons	1483		$\frac{1}{16}$	93
		313530		
Floating Plant.				
"Merak"	167519		$\frac{1}{4}$	41880
"Merak" spare gear	12500		$\frac{1}{4}$	3125
"Perseverance"	135920		$\frac{1}{4}$	33980
"Industry"	73031		$\frac{1}{8}$	9129
"Active"	43252		$\frac{1}{4}$	10813
Cargo boats	7091		$\frac{1}{20}$	355
Sand barges	26272		$\frac{1}{8}$	3284
Jolly boats	4672		$\frac{1}{8}$	584
		470257		
Cranes.				
Steam pile driver	6616		$\frac{1}{20}$	331
Crab winches	887		$\frac{1}{8}$	111
Small derrick	2536		$\frac{1}{8}$	317
2 ton hand	1660		$\frac{1}{8}$	207
Hand Goliath	3451		$\frac{1}{8}$	432
Hopper winch	1042		$\frac{1}{8}$	130
Hand pile driver	1002		$\frac{1}{4}$	250
3 3-ton steam cranes	23673		$\frac{1}{4}$	5918
		40867		
Blockmaking Machinery.				
4 Goliaths	71851		$\frac{1}{8}$	8981
3 concrete cranes, &c.	40319		$\frac{1}{8}$	5040
Stone crusher and engine ...	5000		$\frac{1}{16}$	312
Block moulds	33683		—	—
Skips	6796		$\frac{1}{20}$	340
Nippers	1960		$\frac{1}{20}$	98
		159609		
Block Setting Machinery.				
Titan	64121		$\frac{1}{8}$	8015
Derrick	40119		$\frac{1}{8}$	5015
Lewises	1350		$\frac{1}{8}$	169
		105590		
Workshop Machinery, Gear, &c.				
Engine, &c.	18947		$\frac{1}{4}$	4737
Steam hammer, &c.	5083		$\frac{1}{4}$	1271
Hearths	5623		$\frac{1}{4}$	1406
Lathes	3413		$\frac{1}{4}$	853
Tools and gear	20806		$\frac{1}{8}$	2601
Tipping boxes	4118		$\frac{1}{16}$	258
Chains and anchors	1393		$\frac{1}{3}$	464
Pumps	6884		$\frac{1}{3}$	2295
Brasswork, &c.	2345		$\frac{1}{3}$	782
Sundry stores	5915		$\frac{1}{3}$	1972
Spare gear, cranes, &c.	5705		$\frac{1}{4}$	1426
Permanent way materials—790 tons of rails	32640		$\frac{1}{4}$	8160
		112872		
Rubble shoot	1360		—	—
		1360		
Telegraph line to Mahara ...	6840		$\frac{1}{8}$	855
		6840		
			Carried over...	536450

COST of Valuation, &c.—*continued.*

Description.	Cost.	Total.	Proportion.	Valuation.
	Rs.	Rs.		Rs.
[Brought forward...	—	—	—	536450
Reclaimed Lands.				
Galle Buck, 10½ acres	210000		¼	52500
Root, 4½ „ say	90000		¼	22500
Lotus pond, 16½ „ ...	330000		Full	330000
		630000		
			Rs....	941,450

COST OF STONE from Mahara exclusive of proportion of administration and general expenses in Colombo.

Year.	Expenditure Rs.	Tons.	Cost per ton delivered.	Average cost per ton.	
1877	109,120	56,424	1·93	1·92	
1878	98,158	51,493	1·91		
1879	74,857	36,212	2·07	1·58	1·53
1880	98,271	66,917	1·47		
1881	202,787	129,339	1·57		
1882	201,731	133,746	1·51		

Average per ton for the six years, Rs. 1·66.

XXXVIII.

REPORT

OF A

SELECT COMMITTEE OF THE LEGISLATIVE COUNCIL

APPOINTED

"To Consider and enquire into the Public Expenditure of this Colony, and to advise whether any, and if so, what savings can be effected in the annual charges included in the Estimates now before the Council, due regard being had to vested interests and to the maintenance of the efficient administration of this Island."

Ordered by the Legislative Council to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

EXPENDITURE.

	1866.	1871.	1876.	1881.	1882, Estimated.	1883, Estimated.
	Rs.	Rs	Rs.	Rs.	Rs.	Rs.
Civil Establishments ...	1,541,459	1,635,238	1,851,952	1,959,614	2,075,990	1,996,237
Judicial do. ...	674,166	740,550	820,153	826,121	824,287	821,667
Ecclesiastical do. ...	110,948	90,858	100,051	102,752	103,224	103,230
Education do. ...	159,214	245,366	389,161	504,302	500,978	497,188
Medical do. ...	234,228	294,366	509,838	551,027	607,510	683,720
Police do. ...	188,775	330,455	499,867	659,732	605,994	605,334
Prisons do. ...	205,322	383,803	413,428	465,868	483,790	485,190
Colonial Store	859,231	386,204	710,760	216,177	75,317	68,905
Crown Agents	5,250	7,250	5,599	5,599	5,599	5,599
Pensions	372,716	393,920	459,042	506,700	505,324	539,635
Revenue Services ...	224,013	192,277	277,689	650,717	464,309	467,614
Administration of Justice ...	57,497	48,149	84,038	215,990	183,694	188,036
Charitable Allowances ...	44,039	42,913	41,066	47,122	45,700	45,700
Rent	11,451	11,617	9,672	3,402	3,130	3,260
Transport	112,486	142,136	180,246	100,457	100,575	100,005
Conveyance of Mails ...	68,169	100,781	107,468	251,109	270,354	268,127
Works and Buildings ...	108,209	170,094	403,980	135,342	137,450	110,350
Roads, Streets, and Bridges ...	1,728,990	1,676,253	2,514,927	1,650,890	1,578,968	1,411,566
Miscellaneous	245,124	510,770	414,148	256,977	176,832	147,596
Interest	2,210	1,958	14,622	186,741	209,237	210,671
Military Expenditure ...	1,000,000	1,600,000	1,240,000	1,276,317	1,272,000	1,271,500
Colonial Pay and Allowances...	75,397					
Government Vessels ...	118,050	146,710	140,134	166,002	60,000	55,000
Immigration	52,125	62,503	97,215	104,254	112,940	98,770
Refunds	72,244	9,770	21,470	47,014	50,000	45,000
Lands taken for Government Purposes	2,872	3,613	8,909	1,966	13,460	1,000
Redemption of Dutch Kredit Brieven	49	—	—	1,982	—	—
Telegraph Services .	—	—	—	198,128	107,453	24,044
Service Tenures Commissioner	—	10,020	—	—	—	—
Exchange	—	—	—	45,750	50,000	35,000
Inquiry into Cultivation of Pearl Oysters ...	10,000	—	—	—	—	—
Total...	8,284,216	9,237,574	11,315,435	11,138,052	10,624,115	10,289,944
Railway	892,481	1,404,266	1,752,155	2,395,207	2,332,838	2,004,912
Railway Construction ...	—	—	553,000	—	—	—
Grand Total—Rs.	9,176,697	10,641,840	13,620,590	13,533,259	12,956,953	12,294,856

The expenditure of 1882 was estimated at Rs. 12,956,953, which is Rs. 865,000 in excess of the actual revenue. Every effort has, however, been made to keep this expenditure as low as possible, and it is probable that the revenue for the year 1882 will nearly cover the expenditure.

Turning to the year 1883, the revenue has been estimated at Rs. 12,410,000 As regards many of the items which go to form this amount, there appears to be no present reason to apprehend any material change; but, in regard to the railway receipts the effects of the disastrously small coffee crop now being gathered in had not been anticipated at the date when the estimate was prepared: it now seems unlikely that the gross railway receipts of 1883 will exceed Rs. 2,400,000. The estimate is Rs. 2,750,000, showing a probable falling off of Rs. 350,000 on this one item.

Customs and Toll rents are also unlikely to produce the amounts estimated, and it may be stated roughly that the amount of retrenchment which the Select Committee have to aim at as regards the present may be taken at a sum of Rs. 500,000 required to ensure the Colony against deficit, leaving no margin available for irrigation and other works of improvement.

Prospective retrenchment needed—Rs. 400,000 additional.

In regard to further burdens which the Colony will have to assume during the coming five years, precise data cannot of course be arrived at. A statement has been prepared by the Auditor-General, at the request of the Committee, from which it may be deduced approximately that there will be increased charges on account of interest and sinking fund for the Colombo Waterworks (contribution by Government), the Nánu-oya Railway extension, and the improvement of the Colombo Harbour, amounting in all to Rs. 400,000. In this estimate it is anticipated that the

receipts from the Nánu-oya extension will suffice to cover working expenses, but will not, during the period now under review, contribute anything towards interest or sinking fund on the money borrowed for the construction of the line.

Before turning to the manner in which the very serious financial difficulty above pourtrayed is proposed to be met, the following statement of the principal items of increased charge as compared with the year 1866 will be found interesting:

	1866. Rs.	1883. Rs.	Increase. Rs.
Civil Establishments	1,541,459 ..	1,996,237 ..	454,778
Education charges	159,214 ...	497,188 ...	337,974
Medical do.	234,228 ...	683,720 ...	449,492
Prison do.	205,322 ...	485,190 ...	279,868
Police do.	188,775 ...	605,334 ...	416,559
Total	2,328,998	4,267,669	1,938,671

showing a total increase of expenditure under these five heads amounting to Rs. 1,938,671.

And here it may be prominently noted that much has already been effected in the shape of retrenchment in preparing the annual estimates of the past five years.

The ordinary expenditure of the Colony in 1876 was Rs. 14,676,136; it rose in the year 1878 to Rs. 15,470,635. The estimated expenditure for 1883 is Rs. 12,294,856.

PROPOSED MEASURES OF RETRENCHMENT.

The Committee feel compelled to recommend the withdrawal on promotion or vacancy of the increase of 20 per cent. granted to the first three classes of the Civil Service, to the District Judgeships of Colombo and Kandy, the Queen's Advocate, and the Surveyor-General; they also consider that the addition of Rs. 10,000 made, somewhat subsequently, to the salary of the Governor, should cease upon vacancy, and the emoluments of the office be fixed as before at Rs. 70,000. Increase of 20 per cent. to salaries in 1878.

A large minority of the Committee are, as will be seen by a reference to the division lists, opposed to this measure of retrenchment, but the majority are actuated by the conviction that the increase would not have been sanctioned in 1877, either by the Local or Imperial Government, had there been any anticipation at the time of the serious falling off which has since occurred in the revenues of the Colony. The Committee do not propose, nor would the terms of their appointment warrant them in doing so, to touch the interests of present office holders. The rights of Civil Servants in respect of the rates of family remittance, pay, and pension would of course have to be restored in the case of officers no longer benefiting by the 20 per cent. increase.

No. 1.—ESTABLISHMENTS.

I.—CIVIL.

His Excellency the Governor.

The Committee note the abolition of the post of Subadar of the Mounted Orderlies, effecting an annual saving of Rs. 960.

Secretariat.

It is recommended that the number of Writers be reduced from twelve to ten. The latter number will, the Committee are assured, be ample for the future requirements of the Civil Service, more especially if effect be given to the recommendations which will be submitted in the course of this report for a considerable reduction in the number of appointments in that Service. Secretariat.

The office of Translator and Petition Clerk has been abolished, and a nett saving thereby effected of Rs. 1,100.

Printing Branch.

The Committee have had under consideration a suggestion made to them that a considerable portion of the Government printing might, with economy, be given out on contract, but are of opinion that, inasmuch as Government is obliged to maintain a printing establishment for its own service, it is better and more economical that all the printing should be done at the Government Press.

Treasury.

Three schemes in all have been before the Committee in reference to this office, and its possible combination with the Chairmanship of the Colombo Municipality or the Principal Collectorship of Customs. It was agreed, in the first instance, to report two of the schemes, giving the preference to that for the amalgamation of the Treasury with the Customs. Treasury.

The subject was however disposed of in the interim report, dated the 15th November, and presented to the Council on that day. This report was not signed by the Government Agents of the Western and Central Provinces, who were absent when it was adopted. The Government Agent of the Western Province has recorded his protest. Appendix B.

Audit Office.

The Committee are unable to suggest any reduction in this department, the time of its employés being, they are assured, fully occupied. Audit.

Provincial Agencies.

WESTERN PROVINCE.

In connection with this Agency it is proper to note that a proposal was considered by the Committee for relieving the Government Agent of the Western Province of his duties as Agency, Western Province.

Chairman of the Municipal Council and entrusting those duties to the Treasurer. This proposal, which is alternative to that of the amalgamation of the Treasury and Customs Departments, has been overruled in favour of the latter measure by the interim report presented by the Committee on the 15th November. The saving thus effected is far greater, and the Committee prefer to maintain the connection between the Agency of the Province and the Municipality of its Capital.

It has not escaped the consideration of the Committee that the time of the Government Agent is occupied to an undesirable extent by the supervision of details in the working of the Municipal system, to the possible detriment of the administration of the Province. It was with a view of remedying this state of things that the Committee recommended in their interim report the suppression of the Assistant Agency of Negombo, and that an officer in the same class as the Assistant Agent be attached to the Colombo Kachchéri for the purpose of giving general assistance to the Government Agent in the work of the Province as well as of the Municipality.

Assistant Agency, Negombo

The Negombo District is rich and populous and produces a large amount of revenue, it has however been long settled, previously even to the British occupation of Ceylon, and the same amount of administrative control is not required as in the more primitive parts of the Island. It is small in area and easily accessible by road and rail from Colombo.

The Government Agent of the Western Province is strongly opposed to the abolition of the Negombo District as a separate Assistant Agency, a measure which would, in his opinion, entail much inconvenience on the people, and a loss of revenue far greater than would be counterbalanced by the saving to be effected. These opinions are unquestionably entitled to great weight, coming as they do from the experienced head of so important a Province, but the Committee would observe—

1st.—That the abolition of the Assistant Agency of Negombo was proposed not so much as a measure of retrenchment as with a view of giving assistance at Head Quarters to the Government Agent. This officer presses strongly for such assistance, but it may be left to him to indicate the best means of obtaining it from the staff over which he presides.

2nd.—That the administrative staff of the Western Province was strengthened in 1877 by the addition to it of two officers in the third class of the Service, and that the Committee are not prepared to recommend any further increase.

3rd.—That the efficient control of details in the working of the Colombo Municipality should be provided for by that Body and not at the expense of the general revenue.

The following reductions in the staff of the Department of the Government Agent are proposed:—

The number of messengers attached to the Colombo Kachchéri to be reduced by four.

The salaries of twenty Peace Officers at Rs. 90 each have been omitted from the estimates.

The office of bell-ringer to be abolished on the occurrence of a vacancy.

Assistant Agency, Kégalla.

The Committee are not satisfied that the time of the Assistant Agent at Kégalla is fully occupied. When the Judicial Establishment is considered it will be proposed that he should also undertake the magisterial duties of the station.

NORTH-WESTERN AND NORTH-CENTRAL PROVINCES.

North-Western & North-Central Provinces.

There appears to the Committee to be no longer any sufficient reason for maintaining Nuwarakaláwiya as a separate Province. It was so established in 1873 in reference to the special expenditure undertaken during that and the succeeding years for the revival of agriculture in the district, and in the endeavour to raise its inhabitants from the impoverished state into which they had fallen. This special expenditure has now of necessity been curtailed, and the Committee recommend the amalgamation of the North-Central with the North-Western Province, to which it is contiguous, while there is much similarity between the character and wants of the populations of the Kurunégala and Nuwarakaláwiya Districts. The following statement exhibits the redistribution of the administrative and judicial staffs of the two Provinces, recommended by the Committee:—

Present Establishment.		Rs.	Proposed Establishment.		Rs.
Govt. Agent North-Western Province	...	12,000*	Government Agent, North-Western Province	... ...	12,000
Do. North-Central Province with judicial duties	...	9,000	One Assistant with judicial duties	...	8,000
One Assistant Agent	...	8,000	Do. do.	...	6,000
Two Office Assistants	...	9,000	Office Assistant ...	...	4,500
District Judge, Chilaw	...	6,000	District Judge, Chilaw	...	6,000
Police Magistrate, Kalpitiya	...	4,000			36,500
		48,000			

If the Tamankaḍuwa District be reunited to that of Trincomalee, one officer will, in the opinion of the Committee, be able to undertake the Revenue and Judicial duties of the Nuwarakaláwiya District. The magisterial duties of Puttalam, which are very light, should be undertaken by the Assistant Agent of that station.

* The 20 per cent. increase to salaries is omitted from this statement, having been already dealt with in his Report.

The separate appointment of Police Magistrate of Puttalam and Kalpitiya may then be abolished, the magisterial duties at Kalpitiya being undertaken by the District Judge of Chilaw, whose time is not fully occupied. The temporary court at Máráwila should be abolished.

It should further be possible to reduce the clerical staff at Anurádhapura so as to effect a saving of at least Rs. 1,500, and to abolish the interpretership of the Police Court at Puttalam.

The Government Agent of the Central Province dissents from the proposal to abolish the North-Central as a separate Province.

SOUTHERN PROVINCE.

The Committee recommend that the salary of the Agent of the Southern Province be, upon the occurrence of a vacancy, placed upon the same footing as that of the Eastern and North-Western Agencies. The special rate of salary allowed for this Province was based upon the consideration of the additional expense involved upon the Agent through the halting of the Mail Steamers at Galle, and the consequent demands upon his hospitality. The Mail Station having been transferred to Colombo, this consideration has ceased to exist. Southern Province.

EASTERN PROVINCE.

A saving of Rs. 6,000 may be effected in the administrative and judicial staff of this Province by the retransfer of the Provincial Agency to Trincomalee and the abolition of the separate Office of Assistant Collector of Customs and Landing Surveyor at that station, the duties of which are of an almost nominal character; also by the reduction of the District Judgeship of Batticaloa from the second to the third class in the Civil Service. Eastern Province

NORTHERN PROVINCE.

The Committee are not able to suggest any reductions in the administrative or judicial staff of this Province, it having already undergone revision and reduction. Northern Province.

CENTRAL PROVINCE.

The only change proposed respecting this Province affects indirectly the Assistant Agency of Mátalé, but will be found under the head of Judicial Establishments. Central Province.

With reference to the general question of the Provincial Administration of the Colony, the following resolution was adopted, upon the motion of the Hon. E. J. Young:—

"That with a view to retrenchment, combined with greater efficiency, the Government be requested to consider how the Public Service can best be improved on the basis of dividing Ceylon for administrative purposes into three Provinces corresponding with the division of races, viz, Tamils, Kandyans, and Low-country Sinhalese: and by employing European supervision over larger areas than at present with a sufficient number of qualified natives of the country as subordinate officers in the Service."

The Government has been requested to consider this motion, and in reply the Committee was informed that this resolution would be forwarded with this report to the Secretary of State, without whose consent the Governor could not propose so large a measure affecting, as it did, so many officers borne on the Fixed Establishment of the Colony.

PUBLIC WORKS DEPARTMENT.

It is but just to the Head of this Department to record that considerable reductions have already, on his recommendation, been effected in the cost of his staff in view of the greatly diminished outlay on public works which has been a necessary consequence of the financial depression of the Colony. The charges for establishment for 1883 exhibit a saving of Rs. 37,127 as compared with the estimates for the previous year. Public Works Department.

This department has been re-organized many times in the past twenty years; the latest re-organisation took place in 1874, at an increased annual cost of Rs. 21,616, supplemented subsequently by an additional increase of Rs. 46,000, the leading principle then had in view being that all the officers of the department should be trained engineers specially selected in England, each officer being competent to undertake the supervision of the most important works of construction. While the Committee fully recognise the desirablity of having in this department a sufficient number of scientifically trained officers to ensure the efficient supervision of such works of importance as may be undertaken from time to time by Government, they cannot but think that a waste alike of power and of money is involved in employing such officers on the duties of a Road Surveyor.

It is necessarily discouraging to a young man upon whose scientific training much time and money have been spent, to find his daily avocations limited to the mending of seventy or eighty miles of metalled road and the occasional shifting of the tiles in the roof of some unimportant public buildings. Such work would be done equally well, perhaps better, by a less highly trained person.

The Director of Public Works, who was examined at considerable length by the Committee, expressed his full concurrence in these views, and has submitted the following scheme, whereby a saving will be made of Rs. 50,736 on the estimates of future years. A further saving of Rs. 3,000 will be effected by the resolution of the Committee to reduce the salary of the Director upon vacancy to Rs. 12,000.

"ESTABLISHMENT FOR PUBLIC WORKS DEPARTMENT.

		Rs.
Director of Public Works	...	15,000
Financial Assistant	...	8,000
2nd Do.	...	4,000
Factory Engineer	...	5,000
Total ...		Rs. 32,000

Provincial Engineers.

		Rs.
Central Province	...	10,000
Western Province	...	8,000
Southern Province	...	8,000
Eastern Province	...	8,000
Northern Province	..	6,000
North-Western Province	..	6,000
North-Central Province	..	6,000
Total ..		Rs. 52,000

14 District Engineers with salaries commencing at Rs 3,000 with quadrennial increments of Rs. 500, so that after 16 years' service they obtain Rs. 5,000.

22 Inspectors of Roads and Works with salaries commencing at Rs. 1,500, with quadrennial increments of Rs. 250, so that after 24 years' service they obtain Rs. 3,000.

The Provincial Engineers to be selected from the District Engineers.

The District Engineers to be trained Engineers selected in England.

Appointments as factory apprentices are now so sought after by well-educated and respectable young men, that deserving factory apprentices might be found suitable for the post of Inspectors, or others may be selected in the Island who have a good knowledge of the native languages and are accustomed to work native labour.

Special officers for road tracing and for any special irrigation or other work may be selected from the District Engineers or Inspectors.

No increment of salary to be given to any District Engineer or Inspector without the Director of Public Works certifying to the officer's ability and conduct rendering him deserving of it.

The following is a list of the stations in each Province where District Engineers and Inspectors would be stationed. Those stations marked * to be the District Engineers' stations, the others to be Inspectors' stations.

Northern Province.
* Jaffna
Pallai
Mannár
Vavúṇiya

North-Central Province.
* Anurádhapura
Mihintalé

North-Western Province.
* Kurunégala
Chilaw
Puttaḷam

Western Province.
* Colombo
Kalutara
Avisáwęlla
* Negombo
Haṇwęlla
Kandy road (Ambanpiṭiya)
Pęlmaḍulla

Central Province.
* Kandy
Mátalé
Kaṭugastoṭa
Gampola
Dikoya
Diulula
* Nuwara Eliya
* Badulla
Haldummulla

Eastern Province.
Batticaloa
* Kalmunai
* Trincomalee

Southern Province.
* Galle
* Mátara
Hambantoṭa

There are 12 stations for District Engineers, but I put down 14, so as to allow for leave, sickness, and officers required for special works.

There are 19 stations for Inspectors, but I put down 22, so as to allow for leave, sickness, and officers required for special works, and to command Divisions of Pioneers when employed on special works.

Suppose one-half of the District Engineers and Inspectors are drawing the maximum salary and the other half the minimum rate of salary, this would amount for District Engineers Rs. 56,000, and Inspectors Rs. 49,500. This would make the total cost of the establishment :—

		Rs.
Director and Staff	...	32,000
Provincial Engineers	...	52,000
District Engineers	...	56,000
Inspectors	...	49,500
Total ...	Rs.	189,500

		Rs.
Cost of Establishment as estimated for 1883	...	240,236
As above	...	189,500
Difference ...	Rs.	50,736

Salaries of District Engineers.

		Rs.
1st year to commence with	...	3,000
After 4 years' service	...	3,500
„ 8 „	...	4,000
„ 12 „	...	4,500
„ 16 „	...	5,000

Salaries of Inspectors.

		Rs.
1st year to commence with	...	1,500
After 4 years' service	...	1,750
„ 8 „	...	2,000
„ 12 „	..	2,250
„ 16 „	...	2,500
„ 20 „	...	2,750
„ 24 „		3,000

Establishment as estimated for 1883.

		Rs.
Director of Public Works	...	15,000
Provincial Assistants ...	46,000 8,000	
		54,000
Financial Assistant ...	7,500 500	
		8,000
2nd Financial Assistant	...	4,000
Superintending officers ...	75,000 72,360	
		147,360
Inspector ...	.	1,500
Sub-Surveyor ...	...	2,190
Superintending Officer	. .	1,186
Factory Engineer	...	5,000
Assistant Engineer	...	2,000
	Total . . Rs.	240,236

		Rs.
Fixed Establishment	...	151,500
Provisional ...	...	88,736
	Total ... Rs.	240,236."

The Pioneer Establishment.

The Pioneer Establishment, which has rendered such valuable service to the Colony in the construction of roads and irrigation works, now consists of six divisions numbering about 600 men. The Committee concur with the Director of Public Works in the opinion with which he has favoured them, that this force may well be reduced to three divisions of one hundred men each. The grounds upon which this opinion is based are: 1st, that the special class of work for which the pioneer force was raised has nearly approached completion; and, 2nd, a large force of resident skilled masons, trained partly by working with the Pioneers and partly on works of railway extension, is now available in Ceylon at low rates of wages. All that is required, therefore, is a sufficient body of Pioneers to form a nucleus in case any large public works are undertaken in the future and to regulate the rates of wages for skilled labour.

The Committee have had under consideration a suggestion by the Provincial Assistant of the Central Province that a large saving might be made in road upkeep by omitting the costly operations of blinding and pounding the metal on the main roads, using instead smaller-sized metal and leaving it to be consolidated by the wheeled traffic passing over the road. Having obtained a full expression of opinion, both orally and in writing, upon the question from the Director of Public Works, the Committee are not prepared to say that the economy to be effected would be commensurate with the expense and inconvenience which would result to the public.

The effect of the unblinded metal upon the soft hoofs of the bullocks is not difficult to realise, and an enhancement of the rates of cartage must necessarily follow any measure which would diminish the load which a pair of bullocks would be able to draw.

On the other hand, the Committee are of opinion that there is no occasion to maintain public roads which compete with the lines of railway upon a scale involving any large expense to the public.

Survey Department.

Survey Department.

Having made careful enquiry into the working of this department, the Committee are not prepared to recommend any reductions in its personnel, beyond those already effected by the abolition of the special staff engaged on chena surveys. A general increase is, however, apparent in the cost of the survey work done by the department in the past ten years, and the vigilant attention of the Head of the department should be directed to so organizing and supervising the work that it may be performed with the greatest possible economy.

Customs Department.

Customs Department.

It is proposed that the Principal Collectorship of Customs be amalgamated with the office of Treasurer; that the office of Warehousekeeper created in 1874, and which has not answered the expectations formed respecting it, be also abolished, and that the Customs staff in Colombo consist of a Deputy Collector in the second class of the Service, two Landing Surveyors in the fourth class, and that one of these latter officers perform the duties of Secretary to the Loan Board, and assist the Treasurer in the routine work of his office, besides being available for Customs

duties. The office of Secretary to the Loan Board should, of course, be abolished as an office of separate emolument. The saving to be effected by these proposals will amount to about Rs. 20,000.

Harbour Department.

Harbour Department.

The Committee do not suggest any interference with the establishment of this department. The cost of the Establishment at Colombo will in future be defrayed from the special Harbour revenues levied at that Port.

Postal-Telegraph Department.

Postal Telegraphs.

Although the gross expenditure on this department has largely increased of late years, that expenditure has, in the opinion of the Committee, been justisfied by the increased facilities to the public which have resulted from the management of the Department.

The department is still in a transition state, the fusion of the Telegraph service lately taken over from the Indian Government with the Post Office not being fully completed. With the exception of the reduction of expenditure which will result from this fusion, it has not been found possible to recommend any retrenchment which would not affect the efficiency of the combined department.

A reduction of Rs. 3,000 has, however, already been effected on the estimates of 1883, as submitted to the Council, by inserting, in lieu of the offices of the Deputy Postmaster-General at Kandy and Galle, which have been abolished, the existing Offices of Second and Third Assistant in the Department with the reduced rates of salary now allotted to those posts.

The Postal-Telegraph Department of Ceylon is, it is understood, worked at a loss to the Public Treasury, caused partly by the very low local rates collected on foreign telegrams. These rates are fixed by the International Telegraph Convention and by agreement with the Indian Government, and are not, at present at any rate, open to revision.

Another cause may be found in the fact that the rates of postage on correspondence with and through the United Kingdom were fixed (at a time when the value of the rupee was two shillings) upon the basis of four cents being equivalent to one penny. The charge levied at a single rate on an overland letter is therefore twenty cents only intended to be the equivalent of five pence, while, as the local Post Office has to account to the Imperial Post Office for four pence on each such letter, remitting the money from time to time at the current rate of exchange, it follows that all local operations, of receiving, delivering and despatching letters to and from the United Kingdom are performed gratuitously, twenty cents being, at an exchange of 1*s.* 8*d.* to the rupee, only equal to four pence, the amount which has to be paid to the Imperial Post Office.

As the question of our Postal tariff is at present under the consideration of Government, the Committee do not make any recommendation on this subject further than to express a hope that the Colony will no longer be allowed to carry foreign correspondence at a loss.

But it is undoubtedly of importance that information of a sufficiently accurate nature should be available as to the ratio borne by the receipts of the Postal-Telegraph Department to its expenditure in each branch; this is impossible under the present system by which no account is taken of official correspondence passed free under frank, nor credit given for the work done in forwarding such correspondence.

The Committee recommend that the approximate cost, according to ordinary Postal rates, of forwarding official correspondence be ascertained from time to time by a Committee of Public Officers, of whom the Postmaster-General should be one, and credited to the Post Office, and that an account showing the revenue earned and the charges incurred by the department be annually submitted to Council with the Administration Report of the Postmaster-General.

Botanic Garden and Museum.

Botanic Gardens Museum.

The Committee do not recommend any reduction in the expenditure on the Botanic Garden, the extending usefulness of which institution they gladly recognize; nor in that on the Colombo Museum

Steamer "Serendib."

"Serendib."

Nor does there appear to be any immediate prospect of a reduction in the cost of the Island service performed by the "Serendib." The service is however performed at a considerable annual loss, and the Committee recommend that it should be ascertained, by calling for public tenders, whether the service could be performed more economically by subsidized steamers.

II.—JUDICIAL ESTABLISHMENTS.

Supreme Court.

Supreme Court.

The Committee have no reductions to propose in regard to the Supreme Court.

Queen's Advocate's Department.

Queen's Advocate.

It is the opinion of the Committee that the number of Deputies to the Queen's Advocate is excessive, having regard to the work to be done by them, and, especially, since the concentration of the staff in Colombo. It is recommended that a reduction of two be made in the number of Deputies. The Kurunégala work should be undertaken by the Deputy for the Midland Circuit and that of the Western Province by the Office Assistant to the Queen's Advocate.

District Courts.

District Courts Kegalla and Kurunégala.

The Committee do not consider that there is sufficient work fully to occupy the time of a judicial as well as a revenue officer at Kégalla, where there is at present a District Judge as well as an Assistant Agent; on the other hand, the judicial work at Kurunégala, a station only nineteen

miles distant, and with which there is daily communication by coach, is more than one officer can perform though hardly heavy enough to engage the time of two officers. The Justice of the Peace work is specially heavy at Kurunégala, and it is a district where crime soon becomes rampant unless prompt measures are available for its speedy repression.

It is recommended that the District Judgeship of Kégalla be abolished as a separate appointment, and that the magisterial duties be undertaken by the Assistant Agent; that the District Judge of Kurunégala hold court periodically at Kégalla to try the District Court cases, of which there are not many at that station; and that a Magistrate and Justice of the Peace be stationed at Kurunégala to relieve the District Judge, whose work would thus be increased by having to undertake the Kégalla work, of a considerable portion of his magisterial duties. If a recommendation be approved, which the Committee will make later on in this report, for the appointment of a certain number of native Magistrates, Kurunégala would be a suitable station for one of such posts, the salary of which might be fixed at Rs. 3,000 a year.

The Interpretership of the District Court at Anurádhapura may be abolished (the salary is Rs. 900 per annum) if the recommendations of the Committee be given effect to in reference to this station. **Anurádhapura.**

The Interpretership to the District Court of Mannár should also be abolished; there can be no need for an Interpreter at the Court as well as the Kachchéri at stations where one officer alone combines the revenue and judicial duties. **Mannár.**

In a previous portion of this report the recommendation has been recorded that the District Judgeship of Batticaloa be reduced from the second to the third class of the Civil Service. **Batticaloa.**

Police Courts and Courts of Requests.

The abolition of the office of Police Magistrate, Kalpitiya, and the allotting additional duties to the District Judge of Chilaw have been recommended in connection with the scheme proposed for the re-arrangement of the North-Western Province. It will be necessary to maintain the clerical staff of the Court with the exception of the Interpretership, which may be abolished. The salary attached to this post is Rs. 800. **Kalpitiya.**

The abolition of the Máráwila Court has also been recommended. **Máráwila.**

The Committee are not satisfied that there is sufficient work at this station for two officers as at present, one in the third and one in the fifth class of the Service; on the other hand, the duties are heavier than one officer could undertake single-handed. It has been suggested by the Government Agent of the Central Province that a native Office Assistant be attached to the Kachchéri on a salary of Rs. 3,000 per annum; that the office of Police Magistrate be abolished, and the duties be undertaken by the Assistant Agent. The reduction of expenditure thus effected will be but Rs. 1,000 a year, but the experiment of placing a native Assistant in the Kachchéri is looked upon as one which, if successful, may be developed hereafter with important results, and Mátalé is a very advantageous station for trying such an experiment, having regard to its close proximity to the head quarters of the Government Agent at Kandy. **Mátalé.**

Native Magistracies.

As an extension of the same principle of encouraging the wider employment of natives, the Committee recommend that six of the rural magistracies be removed from the Civil Service and thrown open to natives: of these, three to be on salaries of Rs. 3,000 per annum, and three on salaries of Rs. 4,000. The objects had in view in proposing this measure are:— **Native Magistracies.**

1st.—Economy in the present, for a reduction of expenditure amounting to Rs. 4,500 would be the result.

2nd.—The recognition of the fact that if Ceylon is to be administered on a more economical basis, it can only be by the more extended employment of natives. This is too large a question to find adequate place in the present report, but it should be borne in mind that the system of admission to the Civil Service by competition, instead of qualification, has proved fatal of late years to the entrance of natives into the Service, no native of Ceylon having been admitted through the channel of competition since 1875. This is not to be wondered at in view of the organized system of preparation for examination which has grown up in England, and of the disadvantages under which a Ceylon youth lies in a competition held in a distant country and in, to him, an acquired language.

3rd.—In the interests of the Civil Service as now constituted. The number of posts added of late years to the fourth and fifth classes of the Service has overweighted its lower branches in comparison with the first and second classes in a manner which has rendered and must render the rate of promotion undesirably slow and disheartening. The withdrawal of six junior appointments from the Service will tend to restore a proper equilibrium, while a sufficient number of junior magistracies will still be left to afford the necessary training in the Judicial line.

Registration and Fiscals' Departments.

The offices of Registrar-General and Fiscal of Colombo may, with advantage, be amalgamated, upon a vacancy occurring in either of them, with a saving of the salary of one of the appointments. In neither case is the time of the Head of the Department fully occupied, and the combined duties will not, in the opinion of the Committee, unduly tax the energies of a single officer. It is not proposed to interfere, in any other respect, with either of these Departments. **Registration. Fiscal.**

Ecclesiastical.

The principles on which the Ecclesiastical subsidies are to be in time withdrawn have recently been settled by special legislation. The Committee note that the donations paid to certain Church Missions under "Services exclusive of Establishment" will cease as from 1st July, 1886. **Ecclesiastical**

IV.—Public Instruction.

Public Instruction.

A very practical scheme, and one which meets with their entire concurrence, has been submitted to the Committee by the Director of Public Instruction for relieving the Treasury of a portion of the cost of the expenditure on Government schools.

Mr. Bruce proposes to leave to Municipalities and Local Boards the option of maintaining, by means of special rates, the Government schools within their respective limits, withdrawing direct Government aid to such schools, and leaving the work of education at such centres of population to the grant-in-aid system, unless the rate-payers are prepared to support a small impost for the maintenance of Government schools. If a Municipality or Local Board should so establish a school, it would be eligible to receive a result grant upon the same basis as other aided schools, and the amount to be provided by the rate-payers would be the difference between the gross cost of the school and the grant-in-aid.

The only exceptions to this rule would be the Royal College and the Normal School in Colombo as being Institutions for the benefit of the whole Island, not of a local centre, and the relief to the revenue would be about Rs. 20,000 per annum. The principle involved in the proposal is, however, of more importance than the mere saving alone indicates, for it aims at enlisting in the cause of education local interest and responsibility, and is capable of further extension in a manner which would greatly relieve the general revenue.

The majority of the Committee are however inclined to go further than Mr. Bruce's proposal, and recommend that the net annual expenditure by Government on education be limited to Rs. 300,000, the reduction being made in two instalments, viz., to Rs. 400,000 in the first and and to Rs. 300,000 in the second year; and that any further expenditure be met by fees and by local contributions, and that, in so far as this reduction of expenditure may affect grants-in-aid, such grants be reduced *pro rata*, and that the reductions be fairly distributed over the two systems of Government and grant-in-aid schools.

The Committee have been careful to fix their limit upon the net rather than the gross expenditure upon education, for, under the present system of keeping the public accounts of the Colony, the education vote includes a considerable sum which is recouped in the shape of school fees and of sale of school books, which amounts annually to about Rs. 27,000.

V.—Medical Department.

Medical.

The growth of expenditure in the Medical Department has been even more rapid than that on education. The expenditure in 1866 amounted to Rs. 234,300; the estimates for 1883 provide Rs. 683,720 for this service, which may practically be said to have been created in the interval. And out of this large sum, Rs. 11,273 only were recovered from the public in the shape of fees, while Rs. 4,677 were recovered from the Police and Pioneers as hospital stoppages. The expenditure may be said, therefore, to be wholly eleemosynary.

The Committee are satisfied that a thoroughly efficient check has been established by the Principal Civil Medical Officer over the expenditure of his department, and that the gross expenditure is not susceptible of reduction except by closing some of the hospitals and depriving the native population of that more enlightened medical treatment upon which they have assiduously been taught to place dependence. To this length the Committee are not prepared to go, but they consider that the general revenue should to some extent be relieved of these eleemosynary charges by throwing on the people of the country a considerable portion of the cost of public hospitals.

No doubt this cannot be attempted in the case of the special hospitals established for the treatment of parangi disease, at Vavúniyan-Vilánkulam and Mullaittivu for example, but there appears to be no reason why the cost of the commodious and well-appointed hospitals established at such populous centres as Colombo, Kandy, Galle, Kalutara, Negombo and Mátara should not be borne locally instead of being defrayed from general revenue.

VI.—POLICE.

Police.

The cost of the Police was Rs. 188,775 in 1866; the estimate for 1883 is Rs. 605,334. A sum of about Rs. 120,000 out of this amount is recovered from the Municipalities of Colombo, Kandy and Galle, and from assessments on towns and districts. The Committee are assured by the Acting Head of the Department that he is not prepared to make any suggestion for reducing the cost of the Police without impairing efficiency, and it is so much a matter of special knowledge to determine the precise number of Police which should be attached to each station that any reduction in this direction must be a matter for special enquiry upon the merits of each individual case. The strength of the Police has recently been enquired into and reduced in each of the Municipalities of Galle and Kandy. The Committee recommend:—

That enquiry be made into the necessity for maintaining each of the Police stations outside the Municipalities, with the view of considering whether certain of these stations might not be abolished;

That the cost of the Jail and Treasury guards be separated from the cost of Police required for the suppression of crime, and that the cost of the strength absolutely required for the suppression of crime be levied by a revised system of assessment;

Further, that the Inspector-General of Police undertake, upon vacancy, the duties of Inspector-General of Prisons in addition to his own duties, and without increase of salary.

The duties of the Inspector-General of Prisons are not heavy, the actual work of inspecting the prisons outside Colombo occupying about three months in the year only, two months out of the three being taken up by travelling from one station to another. But it falls within the ordinary duties of the Inspector-General of Police to visit annually every station at which there is a prison, and it would add very slightly to the calls upon his time were he simultaneously to

inspect the prisons and locks-up. There is a certain amount of work attaching to the office of Inspector-General of Prisons in regard to the issue of clothing and diets for the prisoners, but this can be undertaken by the Superintendent in charge of Police Barracks and clothing in Colombo.

It is noted that under the provisions of Ordinance 1 of 1870 the salary of the office of Inspector-General of Police will, upon vacancy, be reduced to Rs. 10,000.

VII.—PRISONS.

Prisons.

The cost of our prisons has risen from Rs. 205,332, in 1866 to Rs. 485,190 as estimated for 1883. The daily average of prisoners was 1,260 in 1866, it has risen now to 3,100. The Committee have carefully enquired into the question of prison diets and prison discipline, and while they have on the one hand had the decided opinion of the Principal Civil Medical Officer that the present scale of diets is the least which can be given and is not too attractive, they have, on the other hand, been assured by the Acting Inspector-General of Prisons, who is also Superintendent of the Colombo Jails, that the life of a convict is far more disagreeable to him than it was ten years ago, and that the people dislike going to prison more especially to certain prisons such as those at Colombo and Hambantota where hard and irksome labour is exacted from them.

On the other hand, both the Principal Civil Medical Officer and Inspector-General of Prisons gave it as their opinion that the prisoners are over-clothed when working in the open air, and that the flannel jacket now worn under the prison "jumper" might on such occasions be omitted.

The Committee do not propose to refer to the general question of Road Ordinance defaulters, a report by a special Committee upon which is now under the consideration of Government, except to recommend that the diet served out to these defaulters be reduced to the scale known as punishment diet. Dr. Kynsey has given it in evidence that this scale is, in his opinion, sufficient, having regard to the short period for which the defaulters are detained in prison.

VIII.—COLONIAL STORE.

Colonial Store.

The department of the Colonial Store having been so recently under consideration by a special Committee of the Legislative Council, the Select Committee do not deem any further revision of it desirable at present.

IX.—RAILWAY DEPARTMENT.

Railway.

The most serious decline which has taken place in any single branch of the revenues of the Colony has been in the railway receipts, which have, in consequence of short crops, declined from Rs. 3,616,000 in 1877, to a probable gross receipt of Rs. 2,400,000 in 1883. The actual working expenses of the railway were Rs. 1,997,060 in 1877 as compared with Rs. 1,391,382, the estimate for 1883.

The Committee do not feel in a position to make recommendations in regard to a department for the management of which so much special knowledge is required. They cannot, however, but feel that the present system of dual administration of the Railway by two separate departments cannot be conducive to vigorous or economical management, and that the concentration of the direction in the hands of one chief is a measure much to be desired.

II.—Services Exclusive of Establishment.

No. 2.—PENSIONS.

Pensions.

The Committee recommend the withdrawal, in the case of all future appointments, of the special addition of five-sixtieths allowed under the Minutes of 26th July, 1861, and 21st July, 1862, in the computation of the pensions of the officers of the Survey and Public Works Departments. This addition was granted as an "exposure" allowance in consideration of the special risk to health involved in former days in the work of both departments. While it may be conceded that in the case of certain of the Surveyors there still are some grounds for special consideration, the anomaly is so great in the case of the majority of the officers so favoured that it appears advisable to do away with the privilege altogether. The Surveyor-General and Director of Public Works have no more travelling or exposure to undergo than may be considered conducive to health, while the majority of the Public Works officers and many of the Surveyors live in the same stations with, and run no greater risks than Civil Servants, while Judicial and Medical officers when employed on inquest duty are subjected to even greater exposure and hardship in travelling. It is absurd to grant to a Public Works officer whose service may have been almost continuously in the hill districts special privileges which are denied to officers whose lot may have been cast at Anurádhapura or Vavúṇiyaṇ-Viláṇkuḷam.

No. 3.—REVENUE SERVICES.

Salt.

Revenue Services.

The question of utilising the local production of salt for the encouragement of fishcuring on the shores of the Island appears to be worthy of the attention of Government as a means of encouraging industry and adding, possibly, to the revenue, and the Committee are informed that the matter is under consideration.

Timber.

Inasmuch as the whole work of the Forest Department is at present under consideration of a special officer, whose report will no doubt be laid before Council, it has not been thought necessary to deal with the question a second time in this report.

Land Sales.

While the Committee are of opinion that every possible publicity should be given to notices of sales of Government land, it can serve no good purpose to advertise in English newspapers sales of small plots of land intended for native purchasers who do not understand the language in which the newspapers are printed, and among whom naturally those newspapers have no circulation. Such publication to be effectual should be by means of notices in the native languages posted at the Kachchéries, Courts, markets and other public places in the neighbourhood, and it is recommended that, as a rule, lots under fifty acres in extent should not be advertised for sale in the local papers unless special circumstances, of which the Government Agent of the Province and Surveyor-General should judge, appear to justify the circulation of the notice through the press. Town and plumbago lots, for example, should be fully advertised for sale.

No. 4.—ADMINISTRATION OF JUSTICE.

Administration of Justice

Much attention has been devoted by the Committee to a consideration of the causes which have produced the growth of expenditure under the head of "Administration of Justice" from Rs. 57,497 in 1866 to Rs. 84,038 in 1876, to Rs. 215,990 (actual) in 1881, and to Rs. 188,036 (estimated) for 1883.

One cause of the increase is to be found in the fact that the cost of the Village Tribunals established under Ordinance 26 of 1871, and amounting to Rs. 42,000, is now charged under this head, but a further cause is to be found in the protraction of the sittings of the Supreme Court, owing to the great number of cases brought before that tribunal, and to the consequent expenditure upon the maintenance of jurors, witnesses, and other attendant details. The subject being one which will be fully dealt with ere long in connection with the Criminal Procedure Code, it appears only necessary here to record the following resolutions which have been unanimously adopted by the Committee as the result of their deliberations :—

(1) That the punitive jurisdiction of the District Courts be increased to two years, imprisonment with hard labour;

(2) That the punitive jurisdiction of the Police Courts of Colombo, Kandy and Galle be increased to six months' imprisonment with hard labour;

(3) That the qualification to serve as an English-speaking juror be increased to Rs. 1,500 per annum, and as a Sinhalese or Tamil juror to Rs. 500 per annum, and that the empanelling of special juries be abolished;

(4) That the number of jurors in criminal cases before the Supreme Court be reduced to nine, and that the verdict of two-thirds in number of the jurors be taken as the verdict of the jury;

(5) That the number of peremptory challenges be reduced to two on each side.

The Committee deem it worthy of consideration whether arrangements might not be made by which one jury only might be required to attend at one time.

No. 6.—CHARITABLE ALLOWANCES.

Charitable Allowances.

It is recommended that the lists of recipients of these allowances should undergo early revision at the various Kachchéries, with the view of ascertaining whether all the names on the lists are those of really deserving persons. The Committee have also been struck by the anomaly that whereas in most of the larger towns in Ceylon organized bodies receive the pecuniary support and the countenance of Government for dispensing aid to the necessitous, separate and independent relief is administered within the same limits through the Kachchéri; the abuses to which such a system may give rise are sufficiently obvious.

It is recommended that all the charitable allowances now paid within the scope of the operations of a Friend-in-Need Society be handed over to that Society in the localities where such Societies exist; the only exception to this rule would, perhaps, be that of compassionate allowances to retired Public Officers who were not entitled to pensions. It may be advisable that these should, as heretofore, be disbursed at the nearest Kachchéri, but the Friend-in-Need Society, if there be one, of the district should be informed of all such allowances in order to prevent further applications to it from the recipients being entertained.

No. 11.—TRANSPORT.

Transport.

It is recommended that the rule recently passed by Government in regard to the Police, reducing the rate of horse allowance from Rs. 40 to Rs. 35 per mensem, be extended to all other departments of the Public Service in which such allowances are payable.

Special reference as to the mode of collection of Customs Dues.

A special reference has been made to the Committee upon the subject of certain Customs duties, in the following letter from the Colonial Secretary, and enclosed report from the Acting Collector of Customs :—

The Hon. the Colonial Secretary to the Chairman of the Select Committee on Retrenchment.

Colonial Secretary's Office,
Colombo, 29th November, 1882.

Sir,—I am directed by the Governor to refer to you the enclosed letter from the Principal Collector of Customs, representing the loss to the revenue consequent on the operation of the Ordinance No. 18 of 1877, and submitting the desirability of effecting a change in the mode of levying the duties on imported grain. The subject is not included amongst those which the Committee was appointed to consider, but

seeing that if the Principal Collector's views were adopted, have an important influence upon the prospective financial position of the country, His Excellency will be glad if the Select Committee will give their consideration to the Principal Collector's letter.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

The ACTING PRINCIPAL COLLECTOR, CUSTOMS, to the Hon. the COLONIAL SECRETARY.

Customs, Colombo,
No. 74. 6th November, 1882.

SIR,—AT this period when revenue is falling and retrenchment contemplated, I think it my duty to bring to the notice of His Excellency the Governor the effect of the loss of revenue by the passing of Ordinance No. 18 of 1877, extending the list of articles exempt from duty on importation. The amount of duty lost by this extension amounted on the quantities imported in 1881 to Rs. 41,346·09; the loss on kerosine oil alone amounting to Rs. 10,432·02. I can give no reason why this article was included in the list of exemptions; but I submit that it be again chargeable with duty.

2. But my special object in bringing this matter to notice is to submit for consideration the desirability of a radical change in the system of levying our grain duties, viz., by weight instead of measurement.

3. I first mooted this question at Galle, in 1862, when at that time rice was imported chiefly from Chittagong loose in bulk, and not in bags, being satisfied that no correct outturn of a ship's cargo could be obtained by measurement, the shipments being by weight, and delivery, or landing, by measurement, and thus in no case agreeing.

4. In 1869 I brought the question again to the notice of the Sub-Committee of Council on the new Customs Bill, during the passing of the Ordinance No. 17 of 1869, when the whole Customs Tariff was revised.

5. In the wholesale trade of imported rice in this Colony it is bought and sold by weight. I believe that in every tariff in the world, with the exception of Ceylon, duties on rice are levied by weight.

6. When I was acting as Principal Collector in June, 1874, the Chamber of Commerce addressed Government requesting that the duties on rice might be levied by weight, and not by measurement, giving, as one of its reasons, that the revenue was less liable to fraud, I reported in favour of the change as a fairer and larger average can be obtained with greater certainty by weighing several bags on each entry, in place of the present mode of cutting open bags and measuring the grain, which can be made to measure more or or less according to the force that is used in pouring the grain into the bushel measure.

7. On Mr. Wright's return from England, this question with my report was referred to him, and he agreed with my views, but nothing appears to have been done since, and I am not aware what reply was sent to the Chamber of Commerce.

8. In 1869 I weighed grain from all ports of India, Burmah, &c. These weights which were then recorded I have still with me for reference, and I find 64 lbs. to be the average weight for a bushel of rice and other grain, and 45 lbs. for a bushel of paddy. At present the duty on a seer or measure of rice is $\frac{29}{32}$ of a cent. I would propose for the purpose of assimilating the duty by weight approximately to the present duty to charge $\frac{1}{2}$ cent per lb. on all grain excepting paddy. This would be an increase of $\frac{31}{32}$ of a cent per measure or quart, or 2 lbs. weight, and I would include it in the tariff at 50 cents per 100 lbs.: this would give an increase to the revenue based upon the importation for home consumption in 1881 of Rs. 185,606.

9. Paddy at present pays a duty of 13 cents per bushel or on 45 lbs. I propose to charge 30 cents for 100 lbs. on this article on a new tariff equal to an increase of 1 cent per bushel. This would give an increase of Rs. 5,611·91.

10. I annex a memorandum of the gain that would accrue to the revenue by these changes, and trusting that I am not out of place in submitting these views to Government, I hope they may receive serious consideration.

I am, &c.,
W. HALLILEY.

PROPOSED Alterations of Tariff on Grain based upon the importation for Home consumption in 1881.

Present rate, 29 cents per bushel.

All grain excepting Paddy.

Bushels 6,186,857 at 29 cents per bushel, duty ... ... Rs. 1,794,188·53

All grain excepting Paddy.

395,958,848 lbs. at 50 cents per 100 lbs., duty ... ... Rs. 1,979,794$\frac{29}{100}$

Difference gain... „ 185,606

PADDY.

Bushels 1,122,433 at 13 cents per bushel, duty ... ... Rs. 145,916·29

50,509,485 lbs. at 30 cents per 100 lbs. duty ... ... Rs. 151,852·20

Difference gain... „ 5,611·91

Loss on Kerosine oil if chargeable with duty ... ... „ 10,432·02

Total gain... Rs. 201,649·93

"True copy,"
W. HALLILEY,
Acting Principal Collector.

The Committee are unanimously of opinion that the proposal of the Principal Collector of Customs that the tax on imported grain be levied by weight at the rates suggested by that officer commends itself to their acceptance, and they recommend it for the adoption of the Legislature.

The Committee have further resolved, with one dissentient, to recommend that the duty be imposed on kerosine oil as before, in accordance with the recommendation of the Principal Collector of Customs.

No. 18.—MILITARY EXPENDITURE.

Military Expenditure.

The Committee have reserved, till the conclusion of their report, the consideration of a most important item in the annual Budget—the Military expenditure of the Colony, amounting to Rs. 1,272,500 in all,—viz., Rs. 1,240,000 payable to the Imperial Government as the cost of the Military establishments stationed in Ceylon, and Rs. 32,500 the estimated grant by the Colony to the Ceylon Light Infantry Volunteers for 1883.

The constitutional basis of the present system under which Ceylon pays for the cost of its garrison will be found in a memorandum prepared in the Colonial Office in the year 1864, reviewing the correspondence which had passed between the Imperial and Colonial Governments on the subject, and recording the conclusions arrived at by Her Majesty's Government thereupon.

It had been contended upon the one hand by the Colonial Legislature that Ceylon was already paying an unfair and disproportionate quota to the Imperial Treasury as a Military contribution, having regard more especially to the rates at which other Eastern colonies were assessed; on the other hand, Her Majesty's Government was of opinion that this contribution was inadequate, considering the strength of the garrison and the financial position of the Colony.

This memorandum formed the enclosure to Mr. Secretary Cardwell's Despatch No. 176 of 26th September, 1864, and, in reference to the complaints based upon a comparison with other colonies and the suggestion that the assessment levied upon each colony should be upon the basis of the Local and Imperial Treasuries sharing the cost of the Colonial garrisons, enunciates the opinion of Her Majesty's Government "that no inflexible rule of the description suggested can be laid down for different colonies, nor indeed for the same colony at different times."

The memorandum enters at much detail into the financial position of the Colony, and shows that at that time, after providing for all current charges and making liberal provision for public works, the Colony enjoyed a working surplus of revenue over expenditure amounting from £90,000 to £100,000 a year, but lowers this estimate to £70,000 a year, of which it is proposed that half should go towards an increase in the Military contribution, the other half being appropriated towards paying off the Railway debt.

As soon as this debt was paid off the second moiety was also to be added to the Military contribution, which was at that epoch Rs. 1,000,000 (£100,000) only, the force maintained in the Island being 1,000 Europeans of all arms exclusive of officers, and about 1,500 Malay or Indian troops of all ranks.

It is needless to recapitulate at any great length the proceedings which followed. A Military Commission sat and reported, the future strength of the garrison was fixed at one European regiment, 800 strong, exclusive of officers; two batteries of Artillery, say 204 of all ranks; the Head Quarters and six companies of the Ceylon Rifles; and 88 Gun Lascars. The cost of this force was, Royal Artillery £23,161; European Infantry £79,467; Gun Lascars £4,762; Native Infantry £52,622; in all £160,012. And the Military expenditure of the Colony was fixed for the time at Rs. 1,600,000 a year.

This appropriation of so large a portion of the public revenues for Military purposes was, however, felt to be a heavy burden seriously retarding the progress of the Colony, and, in 1873, upon the strong representation of the Local Government, it was decided to reduce the garrison by abolishing the Ceylon Rifles, from which measure it was hoped that a reduction might be realized in the amount of the Military contribution, equivalent to the sum at which the Colony had been assessed for that regiment—£52,622. In reality the remission was only £36,000 a year, and as a considerable increase was made to the local Police Force on the ground of the withdrawal of the native troops the actual saving to the Colony proved to be less than half that which had been anticipated.

A considerable reduction was, a few years later, made in the general Military Staff, but this has not affected the question of the rate of contribution payable by the Colony.

This being the history of the more salient points of the question up to the present time, the Committee, referring again to the opinion of Her Majesty's Government, "that no inflexible rule of the description suggested can be laid down for different colonies nor indeed for the same colony at different times," would observe—

1st.—That Ceylon has been placed outside the principles upon which all other colonies have been dealt with in this matter. In fixing for other colonies the cost of the British soldier, Her Majesty's Government have varied, it is understood, between £45 and £50 as the maximum amount per head for which they have called upon any other colony supporting a garrison of European troops. And in many, if not indeed in most instances, even this low rate of capitation is shared between the Imperial and the Local Governments. As Ceylon pays a little more than £100 per man for the European soldiers stationed in the Island, her position in comparison with the rest of the Colonial Empire is not merely exceptional, it is unique.

2nd.—The circumstances of the Colony have so altered since 1864, that its revenues will no longer bear an exceptional expenditure for Military purposes.

The statement in the "memorandum" is no doubt accurate that, in 1864, the revenue of the Colony showed an average surplus of receipts over expenditure amounting to £80,000 or £90,000 a year, but no mention is made of the fact that this surplus was only arrived at by arresting the progress of almost every civilising influence by which the enlightened administration of an important colony is fostered. The prisons of the Island were a disgrace to it; the introduction of European medical treatment among the natives through the medium of well-appointed Government hospitals had hardly been commenced; the Police Force was still in its infancy; an organised system of education had hardly been attempted.

Not unnaturally, as soon as the question of the military contribution payable by the Colony had been settled, the attention of Her Majesty's Government was strongly directed to the shortcomings of the Administration under other heads, and much pressure was brought upon the Local Government to inaugurate a more enlightened policy in regard to its domestic concerns. Most of the prisons have practically been rebuilt at a very heavy cost, while the annual expenditure of the department has more than doubled; admirable hospitals have been established in every centre of population at a cost of treble the expenditure of 1866; the cost of the police force has risen from Rs. 189,000 to Rs. 605,000, while, as regards education, whereas there were in 1863 about 7,000 scholars attending educational establishments supported or aided by Government, the number has risen to 84,757 in 1881, the expenditure having also more than trebled.

It will be seen by a reference to the statement given on page 3 of this report that the expenditure under the four heads—Prisons, Medical, Police and Education—has risen from Rs. 787,539 in 1866 to Rs. 2,271,432 in 1883, an increase of Rs. 1,483,893.

It is to be noted, further, that in respect of this increase there is but little prospect of retrenchment. In respect of the prisons, retrenchment is impossible under any system which would be sanctioned by the Secretary of State; as long as the hospitals are kept open, serious cases of sickness and of accident must be received and treated; the introduction of an organised police force has superseded—in the localities to which it has been extended—the ancient institution of unpaid native headmen, and the force can only be diminished at the risk of greatly increased crime. The education vote remains, and the majority of the Committee have felt themselves bound, in view of the necessities of the time, to recommend that it be reduced by about one-third, though at the risk of paralysing that excellent system which was inaugurated by Mr. Sendall, and has been consolidated by Mr. Bruce, and which should, in the best interests of the Colony, be developed instead of being curtailed.

Her Majesty's Government has reserved to itself "the responsibility of determining in the last resort what is the military or naval force really required for the defence of Ceylon, and what annual payment the Colony can properly be required to contribute in respect of the advantages derived from the protection afforded it by the mother country."* It has not, therefore, appeared to the Committee advisable for them to enter into details of the economies which might be effected in the constitution of the military establishment stationed in Ceylon. It would be easy to point out such economies in respect, for example, of the disproportion between the strength of the Commissariat and Pay Staff with the strength of the garrison, and in other directions, but upon all such points the fullest information is already in the possession of Her Majesty's Government.

Upon the ground that the Colony cannot afford, under its present altered circumstances, to pay the exceptional rate of military contribution levied upon it in more prosperous times, the Committee recommend that an appeal be made to Her Majesty's Government for temporary relief by placing Ceylon somewhat on the same footing as other Crown colonies. Any arrangement to this effect might well be made for a period of five years and be subject to reconsideration at the end of that period. There is no desire on the part of the Committee to repudiate such just burdens as the Colony can afford to meet in respect of its garrison, and should the cultivation of new products be successful in restoring the financial prosperity of the decade—1870–1880—a readjustment of the Military contribution would be entered upon in a liberal spirit. Temporary relief in the present is the urgent requirement of the day.

A reference to the schedule contained in appendix C. will show that the various reductions recommended amount (exclusive of certain services as to which no definite conclusion can be arrived at) to Rs. 397,740, of which it is probable that about one-half may be realized during the present and succeeding years. The remainder can only be given effect to on the occurrence of vacancies, and in some cases the retrenchment can be but gradual and spread over a considerable number of years.

Adding to this amount—nearly Rs. 200,000—the addition to the revenue which may be raised through the revision of the Customs tariff (Rs. 201,650), we arrive at a total relief to the revenue securable in 1883 and 1884 amounting to nearly Rs. 400,000, a sum which will probably suffice to preserve the equilibrium between the revenue and expenditure of the Colony so long as that expenditure remains restricted, as it is at present, to the bare liabilities of the day, leaving nothing available for the improvement and development of the Colony.

J. DOUGLAS.
W. H. RAVENSCROFT.†
W. D. WRIGHT.†
F. R. SAUNDERS.†

[I sign this report only as a correct record of the proceedings and recommendations of the majority of the Select Committee.

The memorandum I now hand in was written when I thought the more correct course would be for me to decline to sign the report.—F. R. SAUNDERS.]

J. STODDART.†
JAMES VANLANGENBERG.
P. RAMA-NATHAN.
W. W. MITCHELL.
F. M. MACKWOOD.
A. L. DE ALWIS.

Legislative Council Chamber,
Colombo, 13th February, 1883.

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* Duke of Buckingham's Despatch No. 207 of 26th November, 1867.
† *See* also separate papers signed by these gentlemen, and by Hon. J. F. Dickson.

TWENTY PER CENT.

THE proposal to reduce, as vacancies occur and without affecting the salaries of present holders, the salaries of the senior members of the Civil Service, and of the District Judges of Colombo and Kandy, the Queen's Advocate, and the Surveyor-General, has been carried by a majority of one, there being six for the proposal and five against it. In this state of almost balanced opinion the minority think it advisable to record their reasons for dissenting from the proposal.

I.—The increase given in 1878 to the higher offices in the Colony was only the last of a long series of measures adopted during the last twenty-five years to place the salaries of all public servants in the Colony on a fair footing. To reduce these salaries and not others would be to place the higher officers on a less favourable footing than many others, and, relatively to the appointments of the less important departments, in a worse position than in 1858, when the Civil Service was last revised prior to 1878.

The following statements show how the pay of appointments in various departments has increased in comparison with the pay in the Civil Service. Appointments at head quarters and at one out-station are taken as examples.

Head Quarters, Colombo.—Two Senior Appointments in each Branch.

Branch.	Appointments.	Salary. 1859.	1877.	1882.	Increase per cent. in branch since 1858.
		Rs.	Rs	Rs.	
Colonial Secretary ...	Colonial Secretary ...	20,000	20,000	24,000	20
	1st Asst. Col. Secretary	10,000	10,000	12,000	20
Government Agent ...	Government Agent ...	15,000	15,000	18,000	20
	Office Assistant ..	4,500	4,500	4,500	Nil.
Judicial	District Judge ...	12,000	12,000	14,400	20
	Police Magistrate ...	6,000	6,000	7,200	20
Customs	Principal Collector ...	12,000	12,000	14,400	20
	Deputy Collector ...	8,000	8,000	9,600	20
Police	Head	7,000	12,000	12,000	71
	2nd	1,500	4,000	6,000	300
Medical	Head	7,000	12,000	12,000	71
	2nd	4,000	8,000	8,000	100
Queen's Advocate ...	Head	15,000	15,000	18,000	20
	2nd	—	—	4,500	New
Public Works ...	Head	12,000	15,000	15,000	25
	2nd	6,000	10,000	8,000	33·33
Survey	Head	12,000	12,000	14,400	20
	2nd	6,000	6,500	6,500	8·33

Kandy.—The Chief Appointments in each Branch.

Branch.	Appointment.	Salary. 1859.	1877.	1882.	Increase per cent. in branch since 1858.
		Rs.	Rs	Rs.	
Government Agent ...	Government Agent ...	15,000	15,000	18,000	20
	Office Assistant ...	4,500	4,500	4,500	Nil.
Judicial	District Judge ...	12,000	12,000	14,400	20
	Police Magistrate ...	6,000	6,000	7,200	20
Medical	Head	4,000	8,000	8,000	100
	2nd	2,500	4,500	5,000	100
Public Works	Head	5,000	10,000	10,000	100
Police	Do.	3,500	4,000	6,000	71
Botanical Garden ...	Do.	4,500	5,000	7,000	54
Queen's Advocate ...	Do.	4,000	5,000	5,000	25
Survey	Do.	7,500	8,000	8,000	7

The following instances show how officers of the Civil Service have lost, when compared with other public servants.

The Government Agent, Colombo, drew in 1858 £1,500, the same pay which he drew in 1848, and it was not till 1878 that he received an increase of 20 per cent., and of this it is now sought to deprive him; whilst the Principal Civil Medical Officer, who, in 1858, had his pay fixed at £700, and in 1866 raised from £700 to Rs. 12,000, is not included in the reduction. Similar remarks might be made in regard to the Police, and other public departments.

The Police Magistrate, Colombo, in 1859 had a salary of Rs. 6,000—the heads of the Police and Medical departments then drew Rs. 7,000 each; his salary is now Rs. 7,200 only, includ-

ing the 20 per cent. increase, while theirs are Rs. 12,000; and the salaries of the second officers of those departments are Rs. 6,000 and Rs. 8,000. He has thus fallen from nearly the equal of the heads, to about the equal of the second officers in those departments. The second officer in the Public Works Department drew the same pay: he now draws Rs. 800 more. The head of the Colombo Academy (Education Department) drew the same pay in 1859: he now draws Rs. 300 more, and a new appointment in this department, *i.e.*, that of Director of Public Instruction, has been made with a salary of Rs. 10,000. The only officer who has not comparatively out-distanced him is the second of the Survey Department, who drew the same, and now draws Rs. 700 less salary.

The Office Assistant, Kandy, in 1859 drew Rs. 4,500, and his salary has not been increased. This was Rs. 1,000 higher than that of the Superintendent of the Police in the Central Province: it is now Rs. 500 lower. It was Rs. 500 higher than that of the senior Medical Officer of the Central Province: it is now Rs. 3,500 lower. It was Rs. 2,000 higher than the second medical officer's pay: it is now Rs. 500 lower. It was Rs. 500 higher than the Deputy Queen's Advocate's: it is now Rs. 500 lower, and all the last three officers are allowed to take private practice. His salary was equal to that of the Director of the Botanical Gardens: it is now Rs. 2,500 lower. It was only Rs. 500 lower than that of the senior Public Works officer: it is now Rs. 5,500 lower.

It will no doubt be argued that the work of these departments has increased, but so has the work of the offices which alone are proposed to be reduced. The Colonial Secretary's Office, as an office of correspondence and administration, is a good index to the amount of work in the offices of administration with which it corresponds; and the work in the Colonial Secretary's office has trebled since 1858. There is also much extra work the result of the passing of new Ordinances, the establishment of Local Boards, Gamsabhá, Branch Road Committees, and Municipalities, the working of which is in the hands of the Civil Service.

The increase of salaries in 1878 was considered fair by the Secretary of State, regard being had to the relative position, duties, and responsibilities of the officers concerned, and of other officers, who in almost every branch of the Public Service, including the clerks, had received large increases of salary from time to time, while the salaries of the Civil Service proper had alone remained unincreased.

It was also understood to be of a permanent character, and has been so accepted by the Civil Service, and counted upon by them in undertaking obligations such as the regulation of their expenses, and insurances, the making provision for the education of their children at home, and other family arrangements. The proposed alteration in their prospects involves, therefore, a breach of settlement, which can only be justified by paramount necessity, and should be adopted only after it has been shown that all other practicable and less objectionable means of improving the financial position are inadequate. This has by no means been shown.

(II.)—Promotion in the Civil Service has been for many years past exceedingly slow, and now to reduce the prospects of the Service by this reduction of salary, in addition to the unavoidable and necessary abolition of many offices, whereby promotion is inevitably retarded, would undoubtedly cause great discouragement at a time when the progress of the Colony and its extrication from its present difficulties must depend more than ever on the energy and devotion of its higher public servants. If the Civil Service should, as a body, become discouraged and crippled in their finances, it is almost inevitable that their work will, in spite of themselves, suffer to the serious detriment of the Colony.

The result of so large a reduction as is proposed will be in some instances that the officers will relapse into debt, to relieve them from which was one object of the increase. If the reduction is approved, men of the third class acting in the second class appointments will, after waiting many years for their promotion, be losers, not gainers, when they receive it, as from the Rs. 8,400 they have been drawing in their acting appointments for many years, they will, instead of receiving the Rs. 9,600 they have been counting on so long, drop to Rs. 8,000 per annum when promoted.

(III.)—Immediate adjustment of the finances is required, but this proposed measure would only come into force slowly: it would probably work no real benefit till the necessity for retrenchment has passed away, and yet it would cause grave difficulties and discouragement at a time when willing help and hard ungrudging work is demanded from all.

(IV.)—It may not be out of place here to point out that, at the very time it is proposed to take away from the Civil Service the increase granted to it by the Secretary of State in 1878, the Colony is assuming the charges for cooly medical aid to the extent of not less than Rs. 100,000 a year in excess of the small sum levied on exports, and is carrying on the duty it has assumed on a scale of great liberality. It maintains for this purpose six hospitals and ten dispensaries (besides five existing Government hospitals) for a population of Tamil labourers of about 160,000, employed on an area of 300,000 acres, a state of things probably without a parallel in the world, however desirable it may be if the necessary funds are justly provided.

In conclusion, the members of the Committee who voted in the minority on this motion, while recording their opinion that the proposal is unadvisable and unnecessary, would state that, if after due consideration it should be proved that the retrenchment required to effect the necessary adjustment of the finances cannot be effected without a reduction in the salaries of the public servants of the Colony, they are prepared to suggest, in lieu of the proposal under consideration, an immediate *pro rata* reduction of all salaries—their own included.

W. H. RAVENSCROFT.
W. D. WRIGHT.
F. R. SAUNDERS.
JOHN F. DICKSON.
J. STODDART.*

Colombo, 13th February, 1883.

* Although Mr. Stoddart has signed this Dissent, he does not agree with it entirely, particularly the last clause suggesting *pro rata* reduction on all salaries in lieu of the reduction of 20 per cent. He has been allowed to explain his reasons in a separate paper.

MEMORANDUM by the Hon. W. H. Ravenscroft.

I believe that the report fairly represents the results of the deliberations and discussions of the Select Committee of the Legislative Council appointed to consider and inquire into the public expenditure of this Colony; but I am unable to endorse all the recommendations and conclusions therein set forth.

I have already expressed my views, in concert with four other members of the Committee, on the question of the withdrawal of the increase of 20 per cent. granted in 1878 to the first three classes of the Civil Service and to certain other officers.

Further, I am of opinion that it is not advisable to reduce the salary of the Governor, as proposed, by Rs. 10,000 a year.

The amalgamation of some and the reduction of certain other offices is recommended, and in some cases I believe the result of the recommendations, if carried out, would be satisfactory and economical. At the same time I feel that greater benefit might fairly be anticipated if a well-considered scheme of amalgamation and redistribution of offices were adopted than can be expected to result from the incomplete mode of dealing with the question that has—I believe, unavoidably under the circumstances—been adopted. I would instance the proposals to abolish the Assistant Agency of Negombo and the Agency of the North-Central Province. I voted in favour of these proposals, believing them to be reasonable; but I think it is more than probable that, with a large and well-considered scheme of redistribution, some modification might be found advisable; for example, it is not clear to me that the amalgamation of the North-Central with the North-Western Province is the best mode of providing for the reduction of the former from an Agency to an Assistant Agency.

By the division lists it will be seen that I question the advisability of reducing the status of the District Judge of Batticaloa. The station is one at which it is, beyond doubt, necessary to have a judicial officer of standing and experience, and, both on account of the people and of the general administration of the district, I view the proposed reduction with misgiving.

W. H. RAVENSCROFT,
Auditor-General.

13th February, 1883.

MEMORANDUM by the Hon. W. D. Wright.

In signing this and the "Interim Report," I think it proper to record that I have done so as regards the proposal for the amalgamation of the office of Principal Collector of Customs with that of Treasurer, because I have been given to understand that the Treasury would be abolished unless some other duties were taken up by the officer in charge of that department.

I think the proposed amalgamation injudicious, and that it cannot safely be made with due regard to the efficient collection of a most important branch of the revenue; and I am satisfied, from my long experience as Collector of Customs, and the experience I have since gained as Treasurer, after mature reflection, that the duties of both cannot be satisfactorily performed by one officer.

W. D. WRIGHT,
Treasurer.

13th February, 1883.

MEMORANDUM by the Hon. F. R. Saunders.

Whilst agreeing with some of the recommendations made in the Report of the Retrenchment Committee, there are yet so many others in which I am unable to concur that I feel compelled to withhold my signature from the report.

In briefly noting my objections, I purpose to follow the order in which the various proposals are treated by the Committee.

1.—*Proposed measures of Retrenchment.*

I have already, together with four other members of the Select Committee, signed a memorandum on the subject of the reduction by 20 per cent. of the salaries of certain appointments in the Civil Service when next vacant.

I desire now to record my conviction that a surer and less objectionable mode of effecting economy in this direction would be by a thorough and complete re-adjustment and amalgamation of offices in the Civil List.

The great defect in the present arrangement of the Service is that officers of long service and experience are called upon to give their time and attention to petty details of office work, which should properly fall to the lot of junior and less paid civilians, or of office clerks; while the senior civilians should be able to give their exclusive and undivided attention to the more serious business of the supervision of larger areas, and to the consideration of measures of State importance for the amelioration of the condition of the people and for the good of the Colony, without being subject to the perpetual interruption of small details of account, petty correspondence, and signature of licenses and similar numerous minor matters of routine which now largely encroach upon their time and impair their usefulness.

If a judicious re-arrangement of the Civil Service, based upon the abovementioned lines, were effected, there would be no need whatever to reduce the scale of salaries at present existing. There would be a greater money saving in the cost of Establishments thus revised, while the efficiency of the Service would be preserved and improved, for which efficiency the stimulus of good prospects of promotion to the juniors is so necessary, and which the adoption of the Committee's recommendation would take away.

It is true that Ceylon is at present passing through a time of depression and of financial anxiety; but I would point out that this Colony has experienced similar periods of depression heretofore (as it must necessarily do in common with other countries in obedience to natural laws), and each time it has emerged into a cycle of yet greater prosperity.

In any case, I submit that the meeting of a present necessity by a mere paring of salaries for retrenchment only is an unstatesmanlike method as compared with a re-arrangement of offices, which aims not only at retrenchment, but also at increased efficiency and stimulus, and will result in more real economy both in the present and the future.

At the same time, a re-arrangement of the Establishments of the Service would enable the Government to create an uncovenanted or subordinate service consisting of natives of the Island, many of whom have character and ability sufficient to enable them to fill such offices with credit, but who at present, owing to educational disadvantages, are unable to pass the high standard of the competitive examination now required for the Civil Service, and are consequently obliged, if they wish to enter the Public Service, to join the Medical, Survey, and other departments, in the few cases in which they are not doomed to remain office drudges on a miserable pittance of pay for life.

The proposal to create six native magistrates under section 2, page 9, of the report, I consider to be a wholly inadequate mode of meeting an admitted want; and I cannot concur in the opinion expressed by the Committee "that the recognition of the fact that, if Ceylon is to be "administered on a more economical basis, it can only be by the more extended employment of "natives, is *too large* a question to find adequate place in the present report."

I hold that it is only by a fair consideration and proper grasp of large questions that true and lasting economy and efficiency can be obtained, and I most strongly urge the careful consideration of a detailed plan for the re-organization of the Service.

Although the Committee rejected a proposal by me to appoint a sub-committee to frame such a report, they did me the honour, on the 7th December, 1882, of asking me to place before them a scheme for the redistribution of Provincial Agencies; but as this involves the re-organization of the whole Service, I was unable to complete a draft scheme in time to lay it before the Committee at their last sitting—on the 13th December—prior to considering the draft report.

I have, however, since prepared a scheme in consultation with Mr. Edward Elliott, C.C.S., which in a few days I hope to submit to His Excellency the Governor for consideration with this report.

Provincial Agencies.

II.—*Western Province.*

I agreed to the proposal to amalgamate the Treasury and Principal Collectorate of Customs rather than place the Treasurer in charge of municipal duties; but I was unable to consent to the arrangement proposed in the Interim Report of the Committee, which relieved the Government Agent, as Chairman of the Municipality of Colombo, from the petty details of work now entailed upon him in the Municipality by sacrificing the interests of the rich and populous district of Negombo, and by the hasty abolition of an Assistant Agency which was created only five years ago on the score of urgent necessity.

I have already entered my protest against the irregularity of the Interim Report, as well as my dissent from some of its recommendations.

I may now add that the case of the Government Agent, Western Province, exemplifies most strongly the waste of administrative power and time owing to the interruptions of routine and minor office details to which I have alluded earlier in this minute, for, whilst he has the responsibilities and duties of administering the whole of the Western Province, containing a population equal to nearly one-third of that of the whole Island, he is yet hampered with the immediate charge of the district of Colombo, which is in itself more populous and more important than either the North-Western or Eastern Provinces. In this connection I would ask special attention to the return of areas, population, and revenue of the several districts of the Island printed in appendix E.

With regard to the Assistant Agency at Kégalla, I am of opinion that it will be quite impossible for the Assistant Government Agent to perform the magisterial duties of the station (which are very heavy) in addition to his own. It might, however, be possible for him to undertake the work of the district court, as is done at Trincomalee, Anurádhapura, Hambantota, Vavúṇiya-Vilánkulam, and Mannár, while the magisterial duties should be performed by a junior civilian or by an uncovenanted magistrate.

The work at this station is far more heavy than at Mátalé, where it is proposed to employ an uncovenanted officer.

III.—*North-Western and North-Central Provinces.*

Concerning the recommendations with regard to the other Provincial Agencies, I need only say that I am in favour of further amalgamation than is proposed in the report. I consider it quite practicable to reduce the number of Provincial Agencies to five, and possibly hereafter to three.

IV.—*Public Works Department.*

I am at one with the majority of the Committee in thinking that in the present condition of the Colony it is probable that few large and important public works will be undertaken by Government for some years, and that therefore it is necessary to effect great reductions in the establishment of the Public Works Department, which of late years has been so largely increased at an additional annual cost of over Rs. 67,000. But I cannot bring myself to assent to the details of the scheme proposed by the Director, Mr. Churchill. I think that a reference to Mr. Hutton Gregory (who is, I believe, the adviser of Her Majesty's Government on such matters)

will bear me out in saying that no "trained Civil Engineer" worthy of the title could be engaged in England if he knew that he had no prospect of drawing more than Rs. 4,500 per annum (equal to less than £375 sterling) until he had completed 16 years' service.

I consider that the recommendations regarding savings in road-upkeep made by the experienced officer now in charge of public works in the Central Province are deserving of more weight than the majority of the Committee are inclined to give them.

V.—Survey Department.

I am of opinion that the cost of this Department is much increased and its usefulness impaired by surveys being made in detached blocks here and there, and not as a rule by villages; and further because the revenue offices are too short-handed to deal with surveys as they are made and sent in. In many kachchéries, and certainly in every kachchéri in the Western Province, there are numbers of plans unattended to and unsettled because there is no officer available for holding the necessary enquiries for dealing with the various claims. I am convinced, and the Acting Surveyor-General supports me in the view, that if the Government would sanction a regular land settlement survey in the Western Province, the salaries of nearly all the revenue officers employed might be met by survey fees and pre-emption recoveries. I calculate that I could relieve the general revenue of the charge of some Rs. 25,000 a year in this way by taking over three or four officers of the 3rd class of the Civil Service to be so employed, and at the same time the Government would sell a great number of small lots to villagers, who are most anxious to become purchasers.

A reference to the Administration Reports of the last few years will show that in the Western Province the demand for small lots is great and increasing, especially since experiments have commenced in new products, and it appears to me that a Select Committee appointed to enquire into the public expenditure ought certainly to enquire into and report upon schemes, which, though they may appear at first sight to require additional expenditure, yet in reality promise good financial results, and at the same time give impetus to industry and enterprise, thus conducing far more to the material and permanent prosperity of the Colony and to an increase of its revenue than the reduction of a few salaries or the abolition of a few offices.

JUDICIAL ESTABLISHMENTS.

VI.—Queen's Advocate's Department.*

In considering how amalgamation of appointments can be carried out without injustice to the Civil Service, I would suggest that when vacancies occur in the Queen's Advocate's Department they should be filled by gentlemen in the Civil Service who have had a legal education in England, have been called to the English Bar, and have had judicial experience in Ceylon. They would then be in a position to show how far they were fit to pass the ordeal of a "practising advocate," which is considered by some as absolutely necessary to fit one for the Supreme Court bench or other high judicial office. The members of the Civil Service do not ask that they should be selected before the members of the local Bar for such offices; they only ask that they may be placed in positions to enable them to prove their fitness, and not be excluded from such appointments as the District Courts of Colombo and Kandy because they belong to the Civil Service, and have as such presided for many years in Courts of the same jurisdiction, though in less important stations. I believe I am right in stating that in Prussia and many other enlightened countries the professions of judge and advocate are entirely distinct and are not interchangeable.

VII.—District Courts, Police Courts, and Courts of Requests.

I have already recorded my dissent from the proposal to abolish altogether the judicial offices at Kégalla. The Committee admit that it would be impossible for one officer to do the double work, and I cannot think that it will be either economical or expedient to abolish an office at Kégalla in order to create a second judicial office at Kurunégala, and to require the District Judge of that station to close his Court periodically in order to sit at Kégalla, twenty miles distant and in another Province.

The objections to this recommendation will, I think, upon careful consideration, be found to be many and insuperable.

VIII.—Registration and Fiscal's Departments.

In any scheme of amalgamation of offices for the purposes of retrenchment, the Fiscal's Department must prove an important factor.

The Registrar-General, and indeed any other officer, even if his time were well employed, would hesitate to decline to take over an office the fees of which would enable him to employ a number of deputies to do the work and accept the responsibility, and at the same time leave him a welcome and appreciable addition to his own salary. But I think a careful consideration of the whole question of Fiscal's fees would lead to far greater savings, and in the scheme referred to by me in paragraph I. I intend to put forward a plan by which I think the Government might bring to the aid of the general revenue some Rs. 20,000 of the Rs. 35,000 now annually drawn as Fiscal's fees without in any way accepting responsibility in the case of an officer failing to do the work required of him in a legal and satisfactory manner.

IX.—Education.

I cordially approve of Mr. Bruce's proposal for relieving the public funds of a portion of the cost of the expenditure on Government schools. But I submit that the principle involved in his proposal may be extended largely throughout the Kandyan districts on the basis of the report

* I was absent when this Department was considered.

made by the Buddhist Temporalities Commission in 1876. This Commission sat to advise the Government as to how far the public revenues (in the shape of taxes due on lands granted to the temples) now handed over to Buddhist Priests and lay incumbents of dewalas might be devoted, among other purposes, to the general education of the Kandyan people. I am still of the opinion, which I then recorded, that the proceeds of the Buddhist revenues derived from these sources should be divided between religious and educational purposes, as was intended when the lands were originally devoted to the temples, and somewhat in the manner urged upon the Commission by 1,056 Buddhist memorialists, whose petition is annexed to the report of the Commission. And I contend that, without materially reducing (as is proposed) the amount available for educational purposes, a large saving to the Colony may be effected simply by apportioning a share of the tax now paid by the Buddhists to the Temple Trustees to one of its legitimate purposes, viz., "the secular education of the Kandyan people," instead of allowing the whole to be wasted and misappropriated under the flimsy pretext that it is being used for religious purposes and for the education of the priesthood.

It is worthy of note that in the two chief Kandyan Provinces—the Central and North-Western—the percentage of children receiving any education at all is most miserably small.

X.—Police and Prisons.

I approve thoroughly of the proposed amalgamation of these two departments, and of the possibility of one officer performing the duties of Inspector-General of both Police and Prisons. I can speak with confidence, as I held the dual appointment myself for nearly one year, in 1873. But I think that it will be necessary to consider carefully the arrangement of the subordinate officers of both departments, and the apportioning of work amongst the Superintendents of Prisons and of Police.

XI.—Land Sales.

I doubt whether the retrenchment proposed under this head is a wise economy, because frequently lands of small extent intended for native holdings are valuable to Europeans if in proximity to their estates, and competition for half-a-dozen lots brought about by newspaper advertisements would more than pay the cost of advertising.

With the recommendation for the circulation of notices of sale in the native language I concur.

XII.—Administration of Justice.

In their consideration of this subject, the Committee have referred to the introduction "ere long" of the new Criminal Procedure Code as being likely to effect a large reduction in the expense of the administration of justice.

It appears to me to be of the *most urgent* importance, upon economical grounds, that there should not be any further delay in the introduction of this and the Civil Code, both already too long postponed.

The enormous expense of lengthy and often unsuccessful prosecutions has of late been growing into a most serious evil, while the loss of time and money through the uncertainty of conflicting systems of law, the varied interpretations of Ordinances, and the numerous technical objections now raised in almost every suit, all contribute daily to unsettle more and more laws already uncertain, insomuch that not only is crime increased and the cost of administration of justice unduly swelled, but the collection of revenue is also most seriously hampered and its amount diminished. I may instance that the arrack revenue and the collections of road tax have both suffered exceedingly from this cause.

To the resolutions of the Committee under the heads "Special reference as to mode of collection of Custom dues," and "Military expenditure," I give my hearty assent.

F. R. SAUNDERS,
Government Agent, Western Province.

DISSENT by the Hon. J. F. Dickson.

Though I agree with the majority of the Committee in many of the recommendations made in this report, I am unable, apart from my dissent from certain recommendations which it contains, to agree to it as a whole, as it appears to me to fail to grasp the financial position of the Colony; and, as a consequence, the proposals it sets forth are in my opinion wholly inadequate to save the Colony from serious financial difficulty.

2. The almost total collapse of the coffee enterprise is the chief cause of the fall in the revenues, but, as will be shown presently, it has not affected the revenue generally, but rather the extraordinary sources of revenue other than that derived from taxation, for coffee pays no taxes except indirectly through the import duty on grain, and the loss is chiefly on land sales, and on the railway,—which was made mainly in the coffee interest, and for the carriage of coffee and estate supplies.

3. In all other respects the resources of the Colony remain much as they have been for the last twenty years, except land revenue, where the decrease is due mainly to the change in the law respecting grain revenue; rents, which show the decrease in tolls by removal of traffic from the roads to the railway, and by failure of coffee crops; and taxes, which represent assessment for police—shown as decreased chiefly by the transfer of the collection to the Municipalities,—and by want of powers under the law duly to collect the taxes.

4. The progress of the revenue under each principal head classified under sources by taxation and sources other than taxation is shown in the accompanying statement for the last twenty years, with the average annual revenue under each head.

STATEMENT showing the Total Revenue raised by taxation and by sources other than taxation in each of the twenty years, 1863—1882 (1882 approximate).

Revenue raised by Taxation.

YEAR.	Arrears of Revenue.	Customs.	Port and Harbour Dues.	Land Revenue.	Licenses.	Rents exclusive of Lands	Stamps and Postage.	Taxes.	Fines and Forfeitures.	Salt.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1863 ...	139,750	2,836,142	66,444	965,182	1,353,337	675,379	610,436	84,713	54,171	643,215	7,428,788
1864 ...	135,938	2,715,434	64,417	664,020	1,421,261	697,672	701,750	93,546	50,199	653,378	7,197,595
1865 ...	242,167	2,951,947	67,046	1,662,808	1,549,925	735,542	769,738	95,168	68,048	684,006	8,226,395
1866 ...	284,620	2,759,819	70,829	1,142,975	1,669,920	560,095	753,666	57,892	75,971	710,747	8,086,534
1867 .	297,100	2,852,062	73,018	1,143,229	1,496,208	421,021	769,454	35,211	74,067	711,989	7,903,959
1868 ...	316,760	2,828,443	74,964	875,473	1,395,984	347,847	759,795	37,417	62,792	628,381	7,327,846
1869 ...	326,324	2,920,648	69,918	1,005,285	1,348,844	343,290	781,284	37,169	71,437	734,121	7,638,320
1870 ..	231,348	2,507,940	83,380	1,090,882	1,374,919	377,815	794,968	43,943	67,505	685,561	7,258,261
1871 ..	321,567	2,455,499	94,807	899,309	1,586,275	357,072	808,814	30,319	90,944	685,337	7,330,033
1872 .	298,679	2,790,223	96,975	859,467	1,858,762	374,894	946,601	28,148	96,998	675,409	8,006,176
1873 ...	240,032	2,957,042	103,297	954,014	1,873,266	425,315	1,083,521	29,681	77,565	754,706	8,498,439
1874 ...	282,316	2,860,836	102,949	862,099	1,848,585	439,973	1,122,546	29,450	90,020	769,884	8,408,658
1875 ..	393,223	2,936,534	106,987	984,056	2,061,820	437,826	1,172,077	35,872	100,403	810,633	9,037,432
1876 ..	384,071	3,009,569	111,879	893,855	2,178,912	433,932	1,306,021	39,708	88,134	784,816	9,230,897
1877 ...	398,617	3,351,787	123,845	1,084,586	2,194,998	439,119	1,348,093	36,045	82,516	840,749	9,900,355
1878 ..	524,178	3,091,082	118,366	1,118,164	2,069,734	415,719	1,368,394	35,242	59,872	919,509	9,720,660
1879 ...	519,[illegible]9	2,966,439	120,954	898,309	1,724,261	393,222	1,238,589	38,467	43,773	797,275	8,740,188
1880 ..	490,482	2,979,381	131,105	886,890	1,659,450	388,991	1,171,642	36,610	66,551	885,821	8,696,923
1881 ..	438,948	2,939,440	147,308	825,218	1,563,433	379,603	1,095,406	27,862	51,974	851,005	8,320,197
1882 ...	423,384	2,730,683	160,223	825,590	1,569,190	372,778	1,043,590	27,990	70,075	850,000	8,053,503
Average of 20 years	333,425	2,873,577	99,435	952,075	1,688,954	450,855	982,315	43,921	72,150	753,847	8,250,557

Revenue raised by sources other than Taxation.

YEAR.	Railway Receipts.	Pearl Fishery.	Land Sales.	Timber, &c.	Reimbursements.	Government Vessels.	Telegraph Receipts.	Interest.	Receipts by the Crown Agents.	Miscellaneous	Special Receipts.	Total.
	Rs.	Rs	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs	Rs.
1863 ...	—	510,723	662,721	502,961	144,575	49,166	71,537	27,538	4,652	76,938	11,101	2,061,912
1864 ..	—	887	677,193	445,749	141,311	24,091	66,753	23,958	4,195	43,512	8,063	1,435,802
1865 ..	—	862	647,950	486,854	193,853	37,703	75,441	28,902	5,101	70,610	11,183	1,558,459
1866 ...	—	770	565,810	469,392	193,244	27,333	114,122	30,393	7,497	121,659	11,981	1,542,201
1867 ...	—	968	373,605	648,414	360,578	6,000	87,911	209,993	3,414	152,148	12,380	1,795,411
1868 ...	—	846	288,522	741,798	242,983	6,500	116,999	169,038	3,460	348,784	5,884	1,924,814
1869 ...	—	361	407,281	654,597	240,381	—	89,077	165,836	4,001	257,467	7,629	1,826,630
1870 ...	2,641,147	287	422,573	518,442	266,835	—	21,306	149,887	3,211	231,806	8,307	3,657,801
1871 ...	1,982,649	402	735,000	452,453	289,973	6,953	4,750	167,841	4,329	233,190	9,218	3,886,758
1872 ...	1,852,894	667	795,864	548,559	247,517	41,706	2,200	92,633	3,464	144,448	10,855	3,740,807
1873 ...	2,378,754	428	874,747	533,623	234,808	42,493	709	142,237	2,363	190,035	10,544	4,410,741
1874 ...	2,359,122	101,588	723,142	652,231	319,690	46,767	—	129,576	13,891	476,095	10,529	4,884,631
1875 ..	2,965,459	117	900,887	675,[illegible]17	332,899	29,941	—	148,670	26,406	319,015	8,138	5,406,549
1876 ..	2,983,143	—	869,838	784,092	343,742	54,705	—	129,187	25,314	287,870	7,347	5,445,238
1877 ..	3,616,404	190,338	1,550,983	934,218	347,248	37,983	—	144,775	25,188	270,660	9,037	7,126,834
1878 ...	3,444,424	588	1,282,404	1,009,204	339,629	64,118	—	176,211	29,187	384,831	10,838	6,741,434
1879 ...	3,365,1[illegible]2	84,568	694,030	930,101	278,633	76,591	—	175,900		394,937	8,587	6,008,489
1880 ..	3,010,659	20[illegible],152	508,215	353,914	335,516	77,841	27,292	176,998	a	454,624	8,994	5,154,205
1881 ..	2,880,091	599,533	468,704	467,723	337,451	37,036	54,810	148,800		422,339	9,809	5,366,296
1882 ..	2,614,800	556	257,116	188,698	343,441	53,912	57,671	218,009		285,370	6,874	4,026,447
Average of 20 years	2,730,360	84,731	682,329	599,902	273,415	36,041	56,469	133,321	10,479	255,819	9,364	3,897,572

a. The Receipts by the Crown Agents during these years have been classified partly under the head "Interest," and partly under the head "Miscellaneous."

5. The present state of things was foreseen by the Commission on grain taxes, and foreshadowed in their report of 1877,* in these words :—

"The revenue from land sales must gradually decrease; so must the revenue from timber, unless a large expenditure is incurred in forming new plantations; and the permanence of the railway profits mainly depends on the continued success of the coffee enterprise."

6. An examination of the returns given in the "Blue Book" will show that in the years 1867—1876 the average acreage under coffee remained steadily at about 200,000 acres. But it rose subsequently to upwards of 330,000, while the exports were steadily falling; in 1867 the exports were 943,592 cwts; they rose in 1870 to 1,054,029 cwts; they fell gradually till in 1881 the exports were only 453,758 cwts; and the current crop is estimated at only 150,000 cwts. Coffee is being gradually abandoned in many places, and other products of great value and promise are taking its place. The problem which the Colony has to solve is how, while it is waiting for other products to replace coffee, it can best meet those charges for railways and roads and other conveniences provided for the benefit of the planting interest on the strength of the contributions they made to the Railway receipts, Tolls, Land sales, and Customs. The charges for interest and sinking fund for the railway have to be met, and cannot be reduced: other charges can be reduced, but only gradually and to a small amount. Considerable reductions have been already made, and, as is shown by the report of the Committee, the further reductions which can be made are exceedingly small. The inevitable conclusion would appear to be that resort should be had to special taxation, and that this should fall on the European community so far as it is to provide for works undertaken in the interests of European settlers.

7. The report shows that the estimates for 1883 (in which the revenue and expenditure are nearly balanced) cannot be accepted. The information obtained since they were framed shows that the revenue will probably be less by Rs. 500,000 than the estimate. There are further charges for interest and sinking fund to be met in the next few years amounting from Rs. 320,000 to Rs. 500,000; and the further loss on land revenue under the new Grain Ordinance may be put down probably at Rs. 80,000 a year. In other words, the Colony has to provide in 1883 against a deficit of Rs. 500,000, and it has to meet further charges amounting in 1884 to Rs. 320,600, in 1885 to Rs. 500,000, with further sinking fund in 1888 amounting to Rs. 34,000 on the loans required to complete works in progress, and there will probably be a loss on land revenue in the next few years of Rs. 80,000, making in all a sum over Rs. 1,000,000 to provide immediately by taxation and reduction of expenditure merely to balance the accounts. The reserve of prudence fixed by the Secretary of State at Rs. 500,000 has no existence, and the margin of assets over liabilities is small. (*Vide* Blue Book of 1881, page 71.)

The anticipated deficit of the next few years is therefore as follows :—

In 1883.	Rs.
Deficit as given in report of Sub-Committee	500,000

In 1884.	Rs.
Deficit as above	500,000
New charges for interest ...	320,600
Loss on Grain Revenue ...	40,000
Total ... Rs.	860,600

In 1885.	Rs.
Deficit of 1884	860,600
New charges for interest and sinking fund	175,400
Loss on Grain Revenue ...	20,000
Total ... Rs.	1,056,000

In 1888.	Rs.
Deficit of 1885	1,056,000
Loss on Grain Revenue ...	20,000
Sinking fund	34,000
Total ... Rs.	1,110,000

8. Nevertheless there is nothing alarming in the financial position of the Colony: its soundness is seen in the small effect of the present depression on sources of revenue not immediately affected by the coffee enterprise, and in the steadiness of the revenue in the Provinces unaffected by the coffee enterprise, as shown in the following statement, in thousands of rupees, of the revenue of each Province for the years 1874—1881 :—

[*In thousands of rupees.*]

Year.	Central.	Western.	Southern.	North-Western.	Northern.	Eastern.	North-Central.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1874	2,510	1,719	1,066	876	642	339	44
1875	2,214	1,749	1,146	977	656	365	53
1876	2,090	2,012	1,085	1,032	--	376	63
1877	2,845	2,206	1,182	1,066	546	400	66
1878	2,374	2,204	1,158	1,226	704	392	124
1879	1,740	1,842	1,104	1,083	702	337	135
1880	1,481	1,809	1,138	1,071	713	381	105
1881	1,277	1,797	1,038	917	711	443	78

N.B.—The Northern Province figures are exclusive of the Pearl Fishery.

As was to be expected, the Central Province has suffered most: it is there that the European coffee interests are largest; the Western and North-Western have gone up and down

* Sessional Paper (1877) XVI., page 7.

together. Of the other Provinces, which are native agricultural districts, the Southern has remained fairly level, while the Northern, Eastern and North-Central have improved.

9. The credit of the Colony has been maintained by the care with which the expenditure has always, for 30 years—from 1853 (with the exceptions of 1868 and 1880)—been kept within the revenue, and this must be maintained at all cost, and all classes must make the needful sacrifices to meet the present necessity without adopting measures calculated to affect the future prospects and progress of the Colony, or to press unduly on the natives, who are not responsible for the present difficulties.

10. The report before turning to the manner in which the financial difficulty is to be met, sets out a statement of five principal heads of increased charge, viz.: Civil Establishments, Education, Hospitals, Prisons, Police: to them I would add another—

	1866.		1881.		Increase.
Administration of Justice ...	Rs. 57,497	...	Rs. 215,990	...	Rs. 158,493

[N.B.—The estimate for 1883 is less than the expenditure of 1881, but on what ground does not appear.]

and, as of paramount importance, the charges, present and prospective, on account of

Interest and Sinking Fund.

Work.	Estimates of 1883.	Additional in 1884.	Total in 1884.	Additional in 1885.	Total in 1885.
	Rs.	Rs	Rs.	Rs.	Rs.
Colombo Waterworks ...	—	140,036	140,036	—	140,036*
Colombo Breakwater ...	208,464	180,600	389,064	24,000	413,064
Mátalé Railway ...	132,330	—	132,330	32,670	165,000
Nanu-oya Railway ...	481,200	—	481,200	118,800	600,000
Total—Rs.	821,994	320,636	1,142,630	175,470	1,318,100

11. The interest and sinking fund on the Colombo Breakwater, assuming that only £650,000 is expended on it at present, and that the construction of the northern arm is postponed to some future time, will amount to Rs. 413,064 per annum. It is expected that the harbour dues for the port of Colombo will be levied at such a rate as to add to the general revenue of the Colony sufficient to cover all charges for the Colombo Harbour, except the sinking fund on the debentures amounting to £400,000, though the harbour dues on the scale recently sanctioned will probably fall short of the estimated revenue of Rs. 450,000 for 1883. (See Sessional Paper XXXI. of 1882.) There will then remain the charges for the Colombo Waterworks, amounting to Rs. 140,036 in 1884 and until 1888, when they will amount to Rs. 174,600. The Sessional Papers noted below† record an arrangement by which the general revenues of the Colony are to be laid under contribution temporarily to the extent of Rs. 90,000 a year towards this work, the balance being paid by the Municipality of Colombo; but the whole of the interest will have to be borne by the general revenue in 1884, as the first payments by the Municipality cannot be expected to commence before 1885. This hardly seems just to the Colony at large, which has already, up to July 31st, 1882, expended on this work Rs. 1,935,144 out of the loan raised for the Nánu-oya railway, which represents a charge already paid for interest on the Colombo Waterworks to the extent of Rs. 138,843.

12. There also remain the heavy charges for the Nánu-oya railway, in addition to the charges on account of the Mátalé railway of Rs. 132,330 in 1883 and 1884, and Rs. 165,410 in 1885 and subsequent years. The charges for the Nánu-oya railway amount to Rs. 481,200 in 1883; in 1884 and subsequent years they will amount to Rs. 601,200. It may have been wise when the revenues of the Colony were Rs. 17,000,000 to undertake to pay out of current revenue the interest on the cost of the Nánu-oya railway extension and the Waterworks during construction, in addition to the charges for the Breakwater, but it is obvious that the position is very different when the revenue is reduced to Rs. 12,000,000. It is to the collapse of the coffee enterprise, coupled with these heavy charges for works under construction, that the present financial difficulty is due; and it has now come to the point that the Colony cannot meet out of current revenue in 1883 the interest—amounting to Rs. 481,200—on account of this work without a serious deficit in the accounts of 1883, which must by all means be avoided; nor is the prospect of meeting the greater sum of Rs. 601,200 in 1884 more hopeful.

13. The extension of the line will probably be open as far as Hatton early in 1884, but this will not mend matters, for there is no expectation that the line will pay its working expenses. It would therefore appear inevitable that the interest and sinking fund must be raised in great part, if not entirely, by special taxation, and as this is a work undertaken specially for European interests, and carried into valleys where there is not one native village, it would be just, as already urged, that the taxation should fall as far as possible on the European settlers. For this purpose I would suggest a general revision of the tariff of duties on imported goods, by doubling or

* In 1888 there will be a further charge for sinking fund on the loan for the Colombo Waterworks of Rs. 34,920, less commission and advertisement charges, which will then be paid from sinking fund, Rs. 356; total—Rs. 34,564: interest on account of any capital raised to pay interest during construction is not included.

† [These figures differ slightly from those given in Sessional Papers XLIX. and LI. of 1879, which take the interest and sinking fund at Rs. 173,800.]

increasing the duties on wines, spirits, and other luxuries used chiefly, if not exclusively, by Europeans, and by fixing the other duties (save those on grain, which had better be left undisturbed, except as to method of collection by weight instead of measure), instead of at five per cent. as at present, at seven and a-half per cent. *ad valorem*, or the equivalent of that rate. A tariff prepared on this scale and applied to the imports of 1881 is calculated to yield Rs. 3,468,520, as against the actual receipts of 1881, viz., Rs. 2,868,111, showing an increase of Rs. 600,409. Allowance must be made for reduced imports, and possible concessions on certain articles; but the tariff could certainly be revised so as to yield Rs. 500,000 in addition to the present duties on imports, and it would not be severely felt. The rate of duty in the Mauritius is 6¾ per cent.

14. As the current revenue for 1883 cannot bear the charges for interest for the Nánu-oya railway, and as new duties cannot be imposed for some months, it would appear that the simplest course will be to charge the interest for 1883 to the capital accounts of the railway and other works, except so far as any surplus from the sinking fund of the Kandy railway may meet the charge, and to raise special taxes to provide for it from 1884.

15. The following extract from Sir W. Gregory's declaration in 1876, on the subject of the means to be adopted to pay for this extension of the railway is taken from the Collected Speeches, Vol. II., pp. 447–449:—

"The words of the Secretary of State, conveyed in his despatch of 21st December, 1874, that 'in the case of lines of railway designed for the service of districts, large portions of which are wholly occupied by existing estates, and not undertaken as conferring an immediate benefit on the general community, it should be perfectly clear that the returns from the anticipated traffic will fully repay the cost of construction and maintenance,' leave no doubt as to the principle which he means to insist on; and it is well, considering the variety of proposals made to meet the financial difficulty, that it should be distinctly understood what this Government will not do, and what it might do should the concurrence of the Home authorities be obtained

"The Government will not allow any portion of the revenue of existing railways to be applied to supplement the deficit on extensions. Such a proposal is met at once by the language of the Secretary of State, and by the fact that existing revenues are mortgaged to the Public Works Loan Commissioners for the Breakwater loan. The Government will not agree to the re-imposition of a general export duty. The Government will not allow the railway rates to be raised to meet the deficit; nor will the Government pledge itself to assign annually any portion of surplus revenue towards railway extension." * * *

"Of course it is impossible for me as yet to form an opinion as to what will be the requirements of the Secretary of State in respect of providing for the deficit on the first sections, or whether he will sanction the construction of the line at all. But one thing is quite clear, that unless the planters indicate their intention to meet this deficit, railway extension will be indefinitely postponed."

16. Before leaving this subject of interest and sinking fund on works carried out by loans, it may be advisable to give the following particulars, not readily found, and not appearing in any one place in the public accounts, showing the progress of the expenditure on the works, and the way in which funds are provided.

STATEMENT showing the amount raised by loans for the construction of the Nánu-oya railway, the Breakwater, and the Colombo Waterworks, the amount expended on each to July 31st, 1882; the source from which funds in excess of the loans have been derived, and the interest on expenditure in excess of loans.

Name of Work.	Amount raised by Loans.		Amount expended up to July 31, 1882.		Sources from which funds in excess of loans have been derived.	Interest on expenditure on the work in excess of loan calculated at 4 per cent.	
	Rs.	cts.	Rs.	cts.		Rs.	cts.
Nánu-oya railway extension ...	12,173,473	94	4,637,723	70		—	
Colombo Breakwater ...	3,807,475	91	6,521,823	93	From general cash balances of the Colony, *i.e.*, from the moneys raised by loan for the Nánu-oya railway.	209,950	0
Colombo Waterworks .	—		1,935,144	83		138,843	85

N.B.—It will be seen that the Breakwater and Waterworks are being carried on with moneys raised in one loan on account of the Nánu-oya railway; and the interest is charged in the public accounts to railway extension; and it would appear to be just that the Breakwater and Waterworks should bear their fair share of any capital charge for interest during construction.

Prisons.

17. Turning now to the heads of expenditure specially selected in the report for notice, I would remark as to Prisons that no reduction would appear possible, except by reducing the number of prisoners; and it is satisfactory to find that notwithstanding the increase in cost from Rs. 205,332 in 1866 to Rs. 465,868 in 1881, the cost per head, notwithstanding the improved conditions of prison life and the better food and clothing now provided, is not more than Rs. 192·16 in 1881, as against Rs. 162·33 in 1866. The daily average of prisoners in 1866 was 1,260; in 1881 it was 2,422.

Hospitals.

18. The charges for public hospitals have increased from a total of Rs. 307,338 in 1872 to Rs. 551,026 in 1881; on which the Governor remarked on opening the present Session "that "the native population derive immense benefit from the expenditure is undoubted; and this "will be a matter of satisfaction to the Council; but it is clear that no further increase can be "allowed in this direction until special provision be made for it, for the relief given is almost "wholly eleemosynary." Against the total expenditure, a sum of Rs. 4,677 was recovered by stoppages from Police and Pioneers, and Rs. 11,273 by sale of medicines at the dispensaries and payments made in a few cases towards cost of maintenance in hospital. To this already large expenditure is added (in 1883) the charge of medical aid to the estate coolies, estimated at Rs. 170,000

a-year, of which Rs. 70,000* is to be raised by export duties on estate produce, and the remainder is a new charge of Rs. 100,000 a-year, assumed in the present time of difficulty by the general revenue of the Colony.

19. The Civil Medical Department from its first institution, nearly twenty-five years ago, has been an absorbing department. It has absorbed the Kandy Friend-in-Need hospital, and the Galle charitable hospital established by Dr. Anthonisz; at last it has absorbed the planters' hospitals throughout the estates. The only hospital which has withstood its repeated efforts at absorption is the Friend-in-Need Society's hospital at Jaffna.

There is probably no other country where a medical department, maintained at the charge of the public revenues, not content with establishing excellent hospitals in the large towns, such as Colombo, Galle and Kandy, adds other hospitals within a few miles of these centres, as at Negombo, within 23 miles of Colombo, with communication by road and by canal; at Kalutara, within 26 miles of Colombo by rail; at Katugastota, at Gampola, and at Mátalé, respectively, within 3, 12 and 16 miles of Kandy by rail; at Mátara, within 26 miles of Galle by road. The Government has not contented itself, as in India and elsewhere, with supplementing private benevolence and local rates: it assumes the whole charge; and when a wealthy native builds a hospital in Ceylon, he only gives the building to the Government, which opens it and maintains it at the public cost. The excellence of the hospitals is undoubted, and the care bestowed on the native patients by the Medical Department is beyond all praise; but until means can be devised of throwing the cost of the hospitals on local rates, I would suggest the revival of Sir H. Ward's export duties for the purpose of meeting in great measure the charges for hospitals. I am aware of the objections which have been raised to the imposition of a general export duty; but this is a case of necessity, and no practicable tax has been suggested which would fall more fairly on the classes which chiefly benefit by the public hospitals. The principle of levying an export duty has been conceded in the case of European estates: and though it might not satisfy the planters, it would remove their objection that it is limited to their produce, if it were extended to all exports, including cocoanuts, coir, oil, cinnamon, and other native products, for hospital purposes. The export duties were imposed by Sir H. Ward as a contribution towards the Kandy railway, and were only removed when the railway was found to be paying its way. They were levied practically without cost, and gave rise to no dissatisfaction. Nor was the duty found to place Ceylon produce at a disadvantage as compared with other countries. The only objection was that native produce not benefited by the railway had to pay. The objection was partially met by giving steam communication round the Island. The objection does not exist when the tax is levied for the maintenance of hospitals open to all classes.

The rates imposed by Sir H. Ward's Act applied to the exports of 1881 give a revenue of Rs. 427,623. Of this, Rs. 70,000 is already leviable by Ordinance No. 9 of 1882, and the additional sum of Rs. 357,000 would be a reasonable contribution from the producers of exportable articles towards the public hospitals, the result being Rs. 170,000 for hospitals for Tamil coolies, and Rs. 257,000 for hospitals open to Tamils and Sinhalese, making Rs. 427,000 by export duties: and taking the limit of expenditure at Rs. 600,600, this leaves Rs. 173,000 as the contribution from general revenue on account of all classes which do not contribute to the export duties. In the estimate of duties on exports, the sum of Rs. 65,000 levied by export duty on plumbago is not included, as this is revenue in lieu of royalty.

Education.

20. The proposals made in the report, if adopted, will afford relief to the revenue to the extent of Rs. 138,000. Rs. 38,000 will be the extreme measure of relief in the first year. Notice must be given of the change, and it can hardly come into effect before 1885.

Police.

21. There would appear to be no reason why the police force used for the detection and suppression of crime should not be limited to the strength the cost of which could be covered by a properly revised and extended assessment. The saving thus effected would be very considerable, and greater efficiency might be obtained by administrative measures referred to below.

CIVIL ESTABLISHMENTS AND ADMINISTRATION OF JUSTICE.

22. To what has been urged by the minority in the report on the question of Civil Service salaries, which alone it is proposed to reduce,† I would add the following statements :—

Salaries of Rs. 6,000 and upwards.

Department.	Amount of salaries of Rs. 6,000 and upwards in 1859.	Amount of salaries of Rs. 6,000 and upwards in 1877.	Increase per cent.	Amount of salaries of Rs. 6,000 and upwards in 1882.	Increase per cent.
	Rs.	Rs.		Rs.	
Medical	7,000	40,500	478	46,500	564
Public Works	31,500	109,500	248	96,500	206
Education	6,000	17,500	192	17,500	192
Police	7,000	12,000	71	12,000	71
Civil Service	317,000	426,000	34	508,800	60
Survey	32,000	39,500	12	41,000	13
Queen's Advocate .	25,000	25,000	0	28,000	12

* Only half of this is to be raised in 1883.

† The proposed reduction in the Public Works Department is a revision of Establishment, not a reduction of salaries, as is suggested in regard to the Civil Service.

Salaries from Rs. 3,000 and under Rs. 6,000.

Department.	Salaries from Rs. 3,000 to Rs. 6,000 in 1859.	Salaries from Rs. 3,000 to Rs. 6,000 in 1877.	Increase per cent.	Salaries from Rs. 3,000 to Rs. 6,000 in 1882.	Increase per cent.
	Rs.	Rs.		Rs.	
Medical ...	8,000	68,750	759	78,750	884
Public Works ...	32,000	157,500	392	158,328	394
Police ...	7,000	21,600	209	28,600	309
Education ...	9,000	22,000	144	29,000	222
Survey ...	22,000	66,500	202	67,500	205
Queen's Advocate ...	12,000	22,000	83	23,500	96
Civil Service ...	127,500	133,000	4	151,000	18

Total from Rs. 3,000 and upwards.

Department.	Total of salaries of Rs. 3,000 and upwards in 1859.	Salaries from Rs. 3,000 to Rs. 6,000 in 1877.	Increase per cent.	Total of salaries of Rs. 3,000 and upwards in 1882.	Increase per cent.
	Rs.	Rs.		Rs.	
Medical ...	15,000	109,250	628	125,250	734
Public Works ...	63,500	267,000	320	254,828	301
Education ...	15,000	39,500	163	46,500	210
Police ...	14,000	33,600	140	40,600	190
Survey ...	54,000	106,000	96	108,400	101
Civil Service ...	441,500	559,000	19	659,800	48
Queen's Advocate ...	37,000	47,000	27	51,500	39

They show that the increase which the Civil Service has received in the last twenty years is exceedingly small when compared with other branches of the Public Service. But the Civil Service must take its share in the sacrifices which must be made by all classes; and it will be, as indeed it is, the first to ask that a fair share in these sacrifices may be allotted to it. It objects to being made the one object of attack, and to the measure which it is proposed to apply to it being excessive. I have prepared a scheme which, while in my opinion it greatly strengthens local authority and improves the administration generally, calls for great sacrifices on the part of the Civil Service: it abolishes many valuable appointments; it reduces many of the remaining offices in value, and makes a nett saving on Civil Service salaries of Rs. 45,600. It provides for an additional staff of thirteen members not in the Civil Service in substitution of ten departmental offices, at an increased cost of Rs. 55,200, as against Rs. 50,500, making a nett saving on the whole of the appointments dealt with of Rs. 40,900. This scheme, which is specially designed to give the local authorities the necessary power to maintain order and suppress crime, and thus reduce the charges for prisons, police and administration of justice, I have submitted to the Governor for His Excellency's consideration.

ADMINISTRATIVE CHANGES.

23. There are some proposals of the Committee which appear to me unnecessarily to disregard native interests and native feeling: from these proposals I feel bound to dissent; and I would wish to offer some remarks upon them.

Negombo.

24. It is proposed to abolish this Assistant Agency in order to give an additional appointment in Colombo. It is a sacrifice of the interests of a native agricultural district to the ever-increasing demands of the town of Colombo; and it will undoubtedly be found necessary, if the Negombo Assistant Agency is abolished, to restore it before long. This will involve increased cost; and the loss of revenue caused by the change will, in the meantime, be far more than the salary of the appointment. The Negombo district is one of the densest in the Island: though only 248 square miles in extent, it has a population of 116,710, or 471 to the square mile.

North-Central Province.

25. It is proposed by the Committee to abolish this Province, giving part to the Trincomalee district, and reduce what remains to an Assistant Agency.

26. To shift the admininistrative centre backwards and forwards in an Oriental country is very dangerous. It unsettles the minds of the people, and impresses them with a feeling of uncertainty as regards the character and determination of their rulers; and in this case nothing of any amount is gained by the change. In the report of the Committee, the proposed change is mixed up with alterations in the North-Western Province, which is a separate matter, as the savings there proposed can be made without touching the North-Central Province. The Agency of the North-Central Province was, until last year, Rs. 14,400. It was then reduced to Rs. 10,800, or, as the Committee puts it (throughout deducting 20 per cent.), Rs. 9,000. There is an office assistant and magistrate on Rs. 4,500. The Agent is also district judge, for which he receives no further salary.

This staff, costing Rs. 9,000 + Rs. 4,500, or Rs. 13,500, does not seem extravagant for a district of 4,046 square miles, with a population of 66,146 persons. If Tamankaḍuwa* (1,026 square miles) with its small population of 5,097 were taken away from it, it would still be 3,020 square miles in extent, and with a population of 61,049—far more than one officer could administer.

27. No one who has not lived among the people knows what it would mean to them, and how serious are the wrongs which result from a native coming up to a station a distance of twenty or thirty miles to be told that the Agent is away and will not be back for three weeks, and that there is no one to hear him. The people of the North-Central Province, after the different state of things they have been accustomed to, should not lightly and without strong necessity be condemned to this; and the saving proposed is at most Rs. 7,000, viz.:—

	Rs.
Agent's salary reduced from Rs. 9,000 to Assistant Agent's Rs. 8,000† ...	1,000
Abolition of Office Assistant and Magistrate	4,500
Reduction of clerical staff (doubtful)	1,500
Total ..	Rs. 7,000†

28. The Committee give the following reasons for their recommendation :—

"There appears to the Committee to be no longer any sufficient reason for maintaining Nuwarakaláwiya as a separate Province. It was so established in 1873 in reference to the special expenditure undertaken during that and the succeeding years for the revival of agriculture in the district, and in the endeavour to raise its inhabitants from the impoverished state into which they had fallen. This special expenditure has now of necessity been curtailed, and the Committee recommend the amalgamation of the North-Central Province with the North-Western Province, to which it is contiguous, while there is much similarity between the character and wants of the populations of the Kurunégala and Nuwarakaláwiya districts. * * * If the Tamankaḍuwa district be re-united to that of Trincomalee‡ one officer will, in the opinion of the Committee, be able to undertake the revenue and judicial duties of the Nuwarakaláwiya district."

29. From this I wholly dissent: one officer cannot undertake the duties. It is impossible, save at the cost of increase of crime and possible necessity for introducing a detachment of police, from which the Province is now free; and this is wholly apart from the sacrifice of the general progress of the people and district.

Nor is it the case that the Province was formed in reference to special expenditure. It was formed as an act of political humanity to save the neglected population from dying out, when Sir William Gregory found that from its geographical position it must be an outlying portion of any Province to which it was attached, and that one officer on Rs. 8,000 had in fact not been able, as an Assistant Agent, to do justice to the people. The "special expenditure" followed long afterwards: after plans had been laid and matured for carrying out works by the combined labour of the villagers free of cost, with some small help from Government. The people have done, and are doing, their share: the promises of the Government alone remain in great measure still unfulfilled. Now, to abolish the Province would be to break faith with the people, and to relegate it to the condition from which the policy of Sir W. Gregory has rescued it, and for a saving of Rs. 7,000 a year, or less. There is no part of the Island where the people have shown such exemplary industry in restoring irrigation works and opening roads without pay as have the people of Nuwarakaláwiya; and to sacrifice them as is proposed will be ruinous to British credit in native estimation.

30. The question is of such vital importance to the natives of Nuwarakaláwiya and Tamankaḍuwa, who are utterly unable to make their wants and feelings known except through their Government Agent, that in view of my long acquaintance with those districts, I would venture, to attach to this some further remarks on the subject.—(*See p.* 29.)

Eastern Province.

31. The chief station of the Province was established by Sir H. Robinson at Batticaloa instead of at Trincomalee. The reasons for that change remain as they were then; and now to upset that settlement is calculated to injure the Government by unsettling the minds of the people. The saving is Rs. 4,000 per annum; and no reasons are shown for the change beyond this small saving.

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32. The financial results of the proposals I venture to submit are as follows :—

In 1883.

To pay on capital account the charges for interest on works under construction (in excess of surplus on the Kandy Railway Sinking Fund), say Rs. 100,000. This, it is expected, will balance the account for 1883.

In 1884.

	Rs.
By additional duties on imports	500,000
By additional export duties	357,000
Public Works (as given by Committee): say one-fifth of estimated reduction	10,000
By re-organization of Civil Service: say half of estimated reduction ...	20,000
Gain in 1884 as compared with 1882	887,000

* During the last eight years roads have been pushed on year by year to connect the whole of Tamankaḍuwa directly with Anurádhapura, and it is not desirable to separate Tamankaḍuwa and Nuwarakaláwiya, which have been brought carefully under one system of administration.

† This is exclusive of the sum of Rs. 200, being 20 per cent. on the extra Rs. 1,000 allowed for Agent's salary.

‡ See note above. (*)

In 1885.	Rs.
As in 1884	887,000
Public Works Department (one-fifth more)	10,000
Education	38,000
Civil Service (one-fourth of estimate)	10,000
Probable payment by Colombo Municipality for Waterworks ...	50,000
Gain in 1885, as compared with 1882	995,000

In 1886.	
As in 1885	995,000
Public Works Department (one-tenth)	5,000
Civil Service (one-eighth of estimate)	5,000
Education	100,000
Gain in 1886, as compared with 1882	1,105,000

It is anticipated that, by further reductions as opportunities occur, and by any concession which may be made in regard to military expenditure, and by improved conditions as new products come into bearing, the accounts will be balanced, and gradually means will become available for irrigation and other works on which the improvement of the Colony depends, and the gradual development of the internal resources of the Island, suspended now for five years, may be resumed.

Council Chamber,
Colombo, 13th February, 1883.

JOHN F. DICKSON.

North-Central Province.

In continuation of paragraphs 25—30 of the foregoing paper, I would here quote the following letter, which sets forth somewhat of the results of the liberal policy which it is now sought to crush :—

Letter from the Government Agent of Anurádhapura to the Colonial Secretary, No. 256 of 16th June, 1879 :—

In your letter No. 106 of the 20th ultimo you state that, in order to assist the Government in coming to a proper judgment as to the probable benefits to be derived from the restoration of the Kalawewá, "it would be desirable to know whether, in consequence of the restoration of the numerous tanks already repaired, the extent of land under cultivation has increased, and if so, to what extent ; and whether since the creation of the separate Province the population has been increased by immigration from the other Provinces."

2. I can show that the results of forming the districts of Tamankaduwa and Nuwarakálawiya into a separate Province already give proof, which will I trust in your opinion be conclusive, of the soundness of the policy which dictated the withdrawal of these wild and long neglected Kandyan districts from their administrative isolation as outlying portions of Tamil Provinces, and placing them in charge of a Government Agent acquainted with Kandyan customs and feelings, whose sole care is the development and improvement of this large inland district, and the removal of the stain which its long neglect of 60 years has left on the administrative character of the Government.

3. I cannot show that owing to the restoration—as yet incomplete—of numerous tanks in this Province, the extent of land under cultivation has materially increased. There has not yet been time for such increase, and while the whole population is engaged year by year in the restoration of the tanks, there is not opportunity : and that I should be asked in the terms of your letters under reply for this evidence of the success of the policy which the late Governor adopted towards this Province, only shows how difficult it is to make clear to the Government the conditions of life among the poor and struggling inhabitants of these forests, and the difficulties with which all efforts for their improvement are beset, when the Government has to depend on papers alone for its information, and has not amongst its advisers, or on the staff at head-quarters, any one possessed of practical acquaintance with any part of this Province.

4. Nor can I show that there is any material increase of population by immigration from other Provinces. It is, indeed, too soon to look for such results, though on this head, as on the former, as I will show hereafter, the results afford good promise for the future.

5. In my first annual report upon this Province I find this passage which I will ask leave to quote :—"Great is the need of improved roads ; still greater is the need of a system by which the numerous tanks on which the people of this Province are dependent for the means of subsistence, shall be gradually repaired and maintained in repair for the future : no spasmodic efforts, no repair of a tank here and a tank there, will be of any use. What is required is a system by which all the available labour of the Province shall be concentrated on the work of gradually restoring the whole of the tanks belonging to inhabited villages. The work must be carried on year by year without intermission. Those who have to devise the system and commence the work must not look for immediate results : they must not even expect to see the results in their time. They must be content with the assurance that if the foundations are well laid, and if the work is carried on steadily and persistently, then in twenty or thirty years the face of this Province will be changed, food and water will be abundant, the population will increase, and the Government will receive largely increased revenues without having incurred any large or heavy expenditure."

6. Under the system here contemplated the Government has given the masonry, and the villagers the earthwork, at an average cost for each tank of about Rs. 1,066 to Government, and Rs. 3,200 to the villagers.*

7. The Government only commenced its share of the work in March, 1875: village labour was first called out for the repair of tanks on 1st July, 1874. Up to 31st December, 1878, the Government had

* See Administration Report, 1876, page 64.

completed the masonry required in 117 tanks: up to the same date the people had given their labour for periods varying from one to five years towards the restoration of 856 tanks.*

In order that the people may not be unduly pressed, and that the ordinary work of cultivation may not be impeded, the period for which labour may be called out for each holding on an average one acre in extent is limited (subject to unimportant exceptions) to 30 days a year, and the work of restoration is spread over seven years. It follows from this, that, except under highly favourable conditions, not a single tank is yet completely restored; in other words, the premises of your letter—"the restoration of the tanks already repaired," refer to a state of progress not yet reached.†

8. I will here proceed to explain under what conditions the extent of land under cultivation is increased, and I will ask that special attention may be given to this point, as it will then be seen that it is not reasonable to expect any material increase until at least three years after the restoration of a considerable number of the tanks is completed.

9. As soon as a sufficient supply of water is secured—and to ascertain this the tank must first be restored, and the people must see that it has been so restored as to hold up more water than is required for the existing fields—and to justify them in undertaking the heavy labour of making a new field, a suitable piece of adjoining jungle is selected: it has then to be surveyed and purchased from the Crown, and when this is done it takes three years to clear the forest, take out the roots, form the ridges, level where necessary, and complete the field. During this period the land is, of course, cultivated with a succession of crops, but it is not converted from forest into arable land in less than three years.

10. In anticipation of the want which will arise for new land, I have applied to the Surveyor-General to make a survey of every paddy field under the tanks in course of repair, and to survey also in each case a portion of connected land for sale, and it is satisfactory to be able to report that in the only case in which land surveyed under the letter quoted above has been offered for sale, it was at once purchased by the villagers, though they still have to work to complete the embankment of their tank.‡

11. But if I am not able to show at present any material increase in the extent of land under cultivation, I can show that the work of restoration now in progress has given a great impulse to cultivation, and has given to cultivated land a value it never had before, and in five years has increased the value of cultivated land—in one known case tenfold, and generally has doubled it.

12. The Crown, though the possessor for more than 60 years of the vast forests of this Province, has never been able to sell a single acre for conversion into fields. Last year I commenced to offer for sale small fields under abandoned tanks. Almost all the land I offered for sale was readily bought under the conditions of Sir Henry Ward's Minute of 27th February, 1857. This land will in three years be a clear addition to the cultivated land of the Province, and in addition to bringing the land into cultivation, the purchasers will restore the tanks on which they depend as far as they can: the land was situated in 31 villages, which will now form 31 new centres of cultivation. The extent of land sold was 347 acres, which were purchased for Rs. 3,858, chiefly by inhabitants of Nuwarakaláwiya, but in one case by new settlers, people from the Seven Kóralés.

13. The demand for abandoned land under these conditions still continues, and the only check upon the sale is the limited extent to which the Surveyor-General is able to comply with my requisition for surveys. There is also a considerable demand for land for paddy cultivation in Tamankaḍuwa; but I am unable to bring the land to sale for want of surveys. I have therefore had recourse to the issue of tickets of occupancy, so as to allow of the cultivation of the land with such security as I can give without a survey and without a transfer; but it cannot be expected that the land will be well or extensively cultivated as long as the tenure is uncertain.

14. I have hitherto been referring to village tanks. I may here mention that Government has restored at its entire cost the tanks of Basawakkuḷam and Madawachchi. As soon as Basawakkuḷam is supplied with water by the restoration of Kaláwewa and the Yóda-ela, several hundreds of acres between the line of the Yóda-ela and the Malwatu-oya will become available for paddy cultivation, and will sell readily; but at present it is not desirable to sell any land under it. Some of the land under Madawachchi has been sold, and out of six purchasers five are new settlers.

15. The improvements which are in course of progress in this Province have, as already indicated, had a most marked effect on the value of cultivated land, as the following cases will show. Three amunams of paddy land at Pinawa (in the south of this Province) sold for Rs. 100 in 1875: the same land was resold this year for Rs. 400. In 1877, three pelas of land in Uddiyankuḷam kóralé were sold for Rs. 30, and were resold in 1879 for Rs. 45.

The increase in the value of property in Anurádhapura itself is quite as striking:—A boutique which sold 1868 for Rs. 300 was sold in 1879 for Rs. 2,000; and one sold in 1876 for Rs. 600, was resold in 1878 for Rs. 1,050. The Government has recently sold a small piece of land in Anurádhapura, with frontage for four small boutiques, at the rate of Rs. 5,400 per acre.

16. Though the extension of the area of cultivation is necessarily still in the future, it is not to be assumed that no benefits have yet accrued from the restoration of the tanks, even though not yet completed. On the contrary, it secured to Nuwarakaláwiya in 1878 the finest paddy harvest ever known, under conditions which, before the work of restoration commenced, resulted in total failure of paddy cultivation. In the former weak state of the bunds a heavy flood breached almost every tank and left the people as entirely without water as if there had been a total drought, but in the great flood of December, 1877, it was found that the tanks, with only a very few exceptions, had been so far improved as to hold up a quantity of water larger than they had ever contained before within living memory without being breached, and the result was the largest crop and the largest land revenue ever known; while, in the adjoining district of North Mátalé, under similar conditions of life and cultivation, but without any attempt having been made to restore the tanks, all the tanks were breached, and there was no cultivation.

17. I would mention further that, though the extent of cultivated land has not yet increased, greater security has been given generally to cultivation, and there is a marked increase in the extent of the existing fields which is cultivated whenever there is sufficient rain to fill the tanks; and also a marked in-

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* See Statistics of North-Central Province, (Sessional Papers, 1876.)

† See letter from Government Agent to Colonial Secretary, No. 256, of September, 1878.

‡ Letter to Surveyor-General, No. 766, of 18th May, 1878.

crease in the paddy revenue, as shown by the following statement of the five years during which the Province has existed:—

PADDY REVENUE for the five years 1874—1878, showing also the extent sown and the produce.

	1874.	1875.	1876.	1877.	1878.
Extent sown, in pelas ...	2,277	13,740	20,910	5,974	21,104
Produce, in pelas ...	17,745	112,490	142,740	42,143	164,594
Revenue ...	Rs. 11,963	Rs. 28,583	Rs. 31,959	Rs. 18,065	Rs. 44,732

The tanks, during their 60 years of neglect under the British Government, had fallen into such a ruinous state that they barely sufficed to hold up enough water for half of the existing fields. Gradually, as the work of restoration progresses, they hold more and more water, and the extent of the original fields which can be sown with security increases accordingly, with the satisfactory results shown in the statement given above.

As soon as the restoration has gone so far as to provide more water than is necessary for the existing fields—but not till then—there will be a general demand for additional land to be brought into cultivation. The present gain is in the greater extent of the existing fields which can be cultivated, and the greater security attending the cultivation by the diminished risk of loss of water owing to the ruined state of the bunds.

18. The bad harvests of 1874 and 1877 were the result of insufficient rainfall to fill the tanks. In like manner, the distress of the present year is caused by the general failure, not only of the paddy harvest, but of all the winter crops, owing to the failure of the usual rains in the last quarter of 1878 and in January of this year.

When with sufficient water the tanks, even in their partially-restored state, enable the people to raise such crops as those of 1878, and bring in so largely increased a revenue, as is shown by the statement in the foregoing paragraph, I submit that the argument in favour of not leaving any tanks dependent on rain-supply when there exist the means of filling them from rivers, is exceedingly strong; and I may here, perhaps, be allowed to repeat what I stated in my annual report for 1876,* that "though the importance of repairing the small tanks, so that they may store as much as possible of the rain that falls, cannot perhaps be over-rated, still it is not of less importance to the progress and prosperity of this province to endeavour to utilize the rivers which now run to waste and render the people independent to a great extent of the local rainfall, which is most uncertain and generally insufficient. * * * *

"Of all the works which promise to secure relief from the constantly recurring droughts, such as those of 1873 and 1876, Kalawewa is the most important, and the Government has sanctioned the restoration of 13 miles of the ancient canal, 53 miles in length, which conveyed the water into Tisawewa in Anurádhapura. The position of this magnificent artificial lake and the line of the canal are shown in the accompanying map.

"The Kalawewa is formed by a dam thrown across the valleys of the Beligamu, Dambulu, and Mirisgoni oyas, and probably contains an area of about 10 square miles or 6,400 acres. The bund is in a good state of preservation except at the great breach, 1,000 feet in width, whence issue under the name of the Kala-oya the united waters of the three streams above named."

19. As stated above (para. 4) I am unable to show any material increase by immigration from other Provinces. It is too early to look for such a result, as it can hardly be expected that there will be many newcomers when the hard work of year-by-year restoring the tanks is still going on. When the tanks are restored there is every reason to look for a large increase of the population, both by immigration and by increased means of rearing children. There are, however, even now, satisfactory indications of immigration to this Province. Under Madawachchi, restored by Government, five out of six purchasers are new settlers; one family from the Seven Kóralés has purchased land in an abandoned village; 84 tickets of occupancy have been issued for paddy land in Tamankaḍuwa, and a large number of applications to purchase land are in the hands of the Surveyor-General. In the absence of a recent Census, the best evidence as to the increase or decrease of the population is the Road Ordinance returns, and I find an annual increase in the number of adults paying road tax for the years 1874 to 1878. The returns are as follows:—

Number of persons in Nuwarakaláwiya and Tamankaḍuwa giving Road Ordinance labour, or commuting for their labour, in the five years 1874 to 1878. (Adult males between the ages of 18 and 55.)

1874 ...	14,928
1875 ...	15,058
1876 ...	15,515
1877 ...	16,098
1878 ...	16,199

20. The steady increase in the revenue is satisfactory evidence of the success which has attended the formation of this Province: it has since risen in five years from Rs. 44,473 in 1874, to Rs. 124,335 in 1878: it has all but trebled in three years, and the increase is the legitimate result of the patient development of the material resources of the Province. In 1878, for the first time, I had the satisfaction of showing a large margin of revenue over expenditure—and in the first years of the Province there was, of course, a strong temptation to make revenue, but notwithstanding frequent applications for additional taverns, I have invariably refused to allow any addition to the number which existed before the Province was formed, and in like manner I have refrained from recommending, and indeed have resisted, the imposition of road tolls, as any revenue from that source would be dearly purchased by hindering the development of internal trade and traffic. In regard to timber the same policy has been followed. Early in 1874 I found that the system of granting licenses to private persons which was then in force was destructive to the forests and an encouragement to fraud. I at once stopped the issue of further licenses, and practically derived no revenue from timber in 1875 and 1876, but waited patiently till a Forester was appointed in 1877. The land revenue has risen from Rs. 14,632 in 1874 to Rs. 46,193 in 1878, and the revenue from timber yielded in 1878 Rs. 49,444, as against Rs. 12,176 in 1874.

21. In the concluding portion of your letter you refer to the expenditure already as money incurred on this Province; on which I would remark that it appears to be larger than it really is, and that it has

* Administration Report, 1876, page 65.

already borne fruit beyond expectation. I would suggest that the expenditure on Public Works be divided into three heads—(*a*) buildings; (*b*) roads and bridges; (*c*) irrigation, and that a return be called for showing the expenditure in detail under each of these heads in the five years 1874—8. The expenditure on buildings, which has been kept down to the lowest practicable point, is the unavoidable investment of capital in carrying on the Public Service, and may be set against the revenue from Customs and salt contributed for sixty years by the districts of this Province before they got anything in return. If from the expenditure on roads and bridges be deducted the cost of the roads from Kandy to Jaffna and Trincomalee, which were in progress when this Province was formed, and are not of chief importance to it, it will be found that a very small sum has been spent on roads for this Province; that in fact it has only been provided with a road to Puttalam and with some bridges on the road to Trincomalee and to branch roads to join the road to Jaffna and Kandy; and against the expenditure on roads is to be set the formation of 180 miles of excellent cart road, opening up the whole of the Province, made by the people themselves without any expense to Government. There is no other part of the Island which can show such voluntary work.

With regard to the Jaffna and Trincomalee road, I will ask leave to quote the following passage from my annual report for 1877:—

"Of the expenditure, a considerable sum has been spent in providing the necessary buildings for the station, and in irrigation; but a very large sum which has been included in the expenditure of this Province is on account of two main trunk roads, of which one is of hardly any benefit to this Province, and the other is only of secondary importance to it."*

The road from Trincomalee to Dambulla and thence to Kandy, of which twenty-seven miles are in this Province, passes through an uninhabited forest, and is destitute alike of population, of cultivation, and of traffic. It might in certain circumstances be an important military road; but it does not fall within any scheme for the development of this Province. The other road is the one from Kandy to Jaffna, of which 57 miles passes through this Province. It was commenced before this Province was formed, and was made without any reference to its wants, but it is no doubt a great benefit to it to have nearly 60 miles of good road running through the centre of it from north to south. Still, it is only of secondary importance to it. It does not open up any of the places to which the traders of this Province mainly resort. The roads of chief importance to this Province are the roads from Puttalam to Trincomalee, now in progress, and the road from Anurádhapura to Kurunégala, not yet commenced.

Against the expenditure on irrigation is to be set the work done by the people themselves. For years the Government has been striving to find some system by which the people might take their share in restoring irrigation work, but in vain, until the people of this Province set the example and showed, if only they were allowed to give labour and not money, that they are ready to give three rupees worth of earthwork to every rupee's worth of masonry given by the Government. I showed in my last annual report that the value of the labour given by the people towards the restoration of the tanks exceeded the total Government expenditure on irrigation by Rs 26,000 in 1876, and by Rs. 55,000 in 1877.

22. Care has been taken not to force the revenue or create a fictitious revenue, but to lay a solid foundation for a permanent and steady increase: the people have been led to work gratuitously on public works of purely local benefits, and, under the system which has been introduced in this Province, have partially restored 856 village tanks, and have made 180 miles of good cart road by which every important village in the Province has been placed in direct communication with the main trunk road. To those who can remember what this Province was in 1874, the change effected by these improvements is astonishing. Before they were commenced this Province was one dense, unroaded forest, with villages scattered here and there, buried in thick jungle, and approached only by narrow footpaths. At a distance of ten yards they were not to be seen. The jungle came up to the fence of the small enclosed space in which the cottages are built; the embankments or bunds of the tanks were covered with jungle, and it was impossible, without cutting a path along the top, to make out in what state of repair they were. There is now a north and south road through the Province, and an east and west road is half finished. From these main trunk roads, certain minor roads made by the Road Committee, and the communal road made by the people gratuitously, branch off in every direction; every village is opened up to light and air by having the jungle cut back so as to give a large space of cleared ground round it, and the bund of every inhabited village has been thoroughly cleared of jungle. The whole outward appearance of the Province has been changed.

23. And the rights of the Crown have not been neglected. In so wild a district the people had naturally got into a habit of helping themselves to land, whether for hén cultivation or paddy fields. This has been stopped; and there is now no part of the Kandyan country in which the rights of the Crown in respect of all the uncultivated land are more clearly established. But the enforcement of these rights has necessarily put some check on an extension of the cultivated land, which might in a few cases have taken place notwithstanding the strain which the restoration of the tanks unavoidably involves.

The people claimed a right to bring into cultivation any land which a tank restored by their labour would irrigate. I have assured to them the right of pre-emption at the upset price of ten rupees an acre; but the lingering hope of being able to take possession of the land without purchase will remain until some dozen villagers set the example of buying the land.

24. It was possible to show a forced and fictitious success—to leave the rights of the people and the rights of the Crown to go on undefined and unsettled; to show some greater extent of land brought under cultivation, but without a title, and without that security which is the first necessity of good government. The revenue might have been forced up by licensing additional taverns, by imposing road tolls, and by a continued sacrifice of the timber in the forests: and expenditure might have been reduced by postponing this and that necessary work, or by putting up unsubstantial buildings to be renewed at heavy and increased cost a few years hence. Immigration might have been encouraged, instead of checked, by allowing hén cultivation to go on without limit, instead of restraining it to an extent unknown in the adjoining districts. By such means a greater apparent success might have been shown; but it would have been at the sacrifice of the future interests of the Province. The steadier and safer course which has been followed will, I trust, meet with the approval of the Government on a review of the results of the last five years, and encourage it to continue towards this Province a liberal policy, and to carry on the work which has been begun on the larger scale which experience of the nature of the climate shows to be necessary to its future prosperity.

25. In conclusion, I will briefly recapitulate some of the principal points of this report.

(1.)—The Government has given the masonry works required for 117 tanks, at a cost of Rs. 136,988. —(Paras. 6 and 7).

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* Administration Report, 1877, page 6.

(2.)—The people have partially restored the bunds of 856 tanks (including the tank to which the Government has given masonry) by their labour, equal in value to Rs. 387,410.—(Paras. 6 and 7.)

(3.)—Until a considerable number of tanks is completely restored no considerable increase in the extent of cultivated land can be anticipated.—(Paras. 8 and 9.)

(4.)—A great impulse has been given to cultivation, and the value of land has been greatly increased by the restoration, as yet only partially, of a large number of tanks.—(Paras. 11 and 15.)

(5.)—Land under thirty-one abandoned tanks has been sold, and several allotments of land have been taken up under tickets of occupancy, and many applications to purchase land are in the hands of the Surveyor-General.—(Paras. 12, 13 and 19.)

(6.)—Land generally has doubled in value in five years; in one case it has quadrupled.—(Para. 15.)

(7.)—The tanks in their ruined state could not withstand a flood, and barely sufficed to hold up water to cultivate half of the existing fields.—(Paras. 16 and 17.)

(8.)—The partial restoration of the tanks has enabled them to withstand one of the heaviest floods on record—in December, 1877, and January, 1878.—(Para. 16.)

(9.)—The extent of the original fields sown annually is steadily increasing. It has risen from 2,297 pelas in 1874 to 21,104 pelas in 1878; and the paddy revenue for the same years has risen from Rs. 11,963 in 1874 to Rs. 44,732 in 1878.—(Para. 17.)

(10.)—The complete restoration of all the village tanks will not preserve the Province from the suffering consequent on the frequent recurrence of seasons of drought and insufficient rainfall —(Para. 18.)

(11.)—For this the restoration of the river-fed reservoirs is necessary; and of these reservoirs the most important is Kalawewa, with its great canal, the Yoda-ela (as yet only partially traced out and surveyed), of 70 or 100 miles in length.—(Para. 18.)

(12.)—The total revenue has increased from Rs. 44,473 in 1874 to Rs. 124,335 in 1878.—(Para. 20.)

(13.)—The timber revenue is in course of development, and in 1878 yielded Rs. 49,444 as against Rs. 12,176 in 1874.—(Para. 20.)

(14.)—Care has been taken to lay a sound foundation for a steady and permanent increase in the revenue, and to keep the expenditure down ro the lowest point consistent with a real economy, which looks to good rather than to cheap work.

(15.)—The Road Ordinance returns show a steady increase in the population in the last five years. —(Para. 19.)

(16.)—The rights of the Crown over the uncultivated land have been carefully protected and established."—(Para. 23.)

This letter brought down the history of the Province to the end of 1878. But in 1879 it had to suffer from unexpected trials. Towards the end of 1878 the local Government became aware of the shrinking of the sources of revenue connected with European enterprise, and it stopped, as far as possible, all works in progress, and cancelled all votes on which the balances were unexpended so far as these balances were concerned. This affected the North-Central Province in a moment to the extent of Rs. 130,000. No notice was given of the change, and the people who were working in large numbers on the public works were left without work; and they had not cultivated their fields or hén, as they were employed on the public works, and saw no reason to doubt that the works would go on and give them continued employment and means of subsistence.

Left thus without food and without work, they must have suffered severely in ordinary years; but unfortunately the winter of 1878-1879 preceded the most severe drought the Province had known for years, and the result was extreme distress throughout 1879, from which relief works afforded only slight relief. They stayed starvation, but still did not save the loss by sale and death from drought, of the cattle on which the people depend for ploughing and other agricultural work; nor did they help to secure a supply of seed corn for the following year. The result was that the land revenue of 1879 went back to less than it had been in 1874; much of the work of the years 1874—1878 had to be done again, and with more care and greater consideration for the people, whose trials had been most severe. Gradually, improvement began to show itself.

Mr. G. W. Templer, in his report for 1880, says :—

"It is satisfactory to turn * * * to the head "Land Revenue," which shows an increase over the previous year of Rs. 11,049 81. The want of seed paddy was much felt throughout the Province at the commencement of the year, and, at my request, Government advanced 2,632 bushels, the value of which was repaid after the people had reaped their harvest. The whole sum due, amounting to Rs. 8,820, was paid in without necessitating recourse to the law in one single instance.

"The revenue would have been far greater had the people not been so crippled by the previous years of drought. Their cattle had died in large numbers, and their food supply was exhausted. Their first endeavours were to procure food in the quickest manner possible, and hén clearing was carried on to the detrument of paddy cultivation, and consequently of the revenue, inasmuch as there is no tax on dry grain."

And, writing of irrigation, he continues :—

"The usual objection to the execution of large irrigation schemes in Ceylon, such as Kanthalai and Tissamaharáma, is the want of population at the spot. This objection does not apply to Kala Balala [*i.e.*, Kala]. There are 10,000 people who would immediately benefit by the scheme, and on their behalf I earnestly appeal to Government to carry out this most important work, the execution of which, at the earliest possible date, has been most distinctly promised. It is difficult to explain to people who have never resided in the North-Central Province the importance of a certain water-supply: without it the people are at once crippled; with it they can easily obtain more than enough to live in contentment and prosperity. A good deal has been done for them, but not anything like what was promised. They were told that if they repaired their tanks they should have sluices; as a fact, nearly every tank is ready to be sluiced, but not one-tenth of the required number of sluices has been supplied."

Further improvement was shown in 1881, as explained in the report for that year :—

"The year, on the whole, has been satisfactory; food has been abundant and cheap, and the sources of revenue, which best indicate the condition of the people, show an increase on the two previous years. The total revenue shows a decrease, as compared with 1880, of Rs. 27,055, but this is more than covered by

the decrease under the head "Sale of Government Property" of Rs. 31,955, which is caused by the holding back from sale of the timber of the Province, as will be hereafter explained. If the sale of Government property be deducted from the account it will be seen that the increase in revenue is Rs. 4,900 in 1881 as compared with 1880.

"The increase in land revenue was Rs. 5,632. The total land revenue was Rs. 29,515, which shows a satisfactory recovery from the year of distress (1879) when it fell to Rs. 13,834 from Rs. 46,193, which it reached in 1878. The harvests were generally abundant, but prices were low and money was scarce; the people had not recovered from the serious distress of 1879, and it was, therefore, necessary to show them much consideration in fixing the amount of land revenue to be paid where this was not settled by competition. The amount of land revenue without these explanations affords in the year under review an insufficient index to the abundance of the food supplies of the people and their consequent contentment."

And that report concludes as follows:—

"The Census shows an increase of population between 1871 and 1881 of 3·59 per cent. Looking to the results of the Census in other parts of the Island similar in climate and in the conditions of life, this result may be regarded as satisfactory. The Province was not created until the end of 1873: the work of restoring the tanks made slow progress until the middle of 1876, and obviously the results could not be seen in increase of population in 1881. That the decrease of population has been checked is for the present satisfactory. With increased cultivation and increased food-supply, increase of population will naturally follow in the next ten years.

"That cultivation may be permanently increased, and that the growth of population may not be checked by distress bordering on famine, as in 1879, it is imperatively necessary that the river-fed irrigation works be restored. Without their restoration much of what has been spent on this Province in the last eight years will be lost. That is comparatively a small matter: it is more that the benevolent and so far successful endeavours of the Government to rescue the inhabitants of this Province from sickness and decay will be lost. Then these efforts, if abandoned, will by force of contrast only make blacker the darkness of the past neglect of the first sixty years of British rule, for which it was the object of Sir William Gregory to atone. The work which has been undertaken in this Province has been one of political humanity of the highest and noblest kind, so designed as to make the people help themselves and ultimately in a position to repay what is now spent upon them. But that they may do this there must be no going back from the work thus far successfully accomplished, and it is earnestly to be hoped that in spite of present financial difficulties the great irrigation works which are essential to the preservation of the people will be no longer delayed."

The response of the Committee is—"abolish the Province." It is a remote native Province, the people of which cannot make themselves heard. It is earnestly hoped that this protest made in their behalf may conduce to the adoption of a more liberal and more humane policy.

JOHN F. DICKSON,
late Government Agent of the
North-Central Province, 1873–1882.

Colombo, 13th February, 1883.

APPENDICES.

EXTRACT from the Minutes of the LEGISLATIVE COUNCIL, dated 11th October, 1882.

Resolved,—"That a SELECT COMMITTEE of the Council be appointed to consider and inquire into the Public Expenditure of this Colony, and to advise whether any, and what savings can be effected in the annual charges included in the Estimates now before Council, due regard being had to vested interests and to the maintenance of the efficient administration of the Island. That the following Members shall form the Committee, the sittings of which shall be open to all Members of Council:—The Hon. the Colonial Secretary, the Hon. the Auditor-General, the Hon. the Treasurer, the Hon. the Government Agent, Western Province, the Hon. the Government Agent, Central Province, the Hon. J. VanLangenberg, the Hon. P. Ráma-Náthan, the Hon. F. M. Mackwood, the Hon. W. W. Mitchell, and the Hon. A. L. De Alwis.

"The Committee to have power to send for persons, papers, and records; five to form a quorum."

EXTRACT from the Minutes of the LEGISLATIVE COUNCIL, dated 15th November, 1882.

Resolved,—"That the Hon. the Surveyor-General and the Hon. E. J. Young be added to the Select Committee appointed by Resolution of Council on the 11th October last."

APPENDIX A.

DIVISION LISTS.

1.

Tuesday, 24th October, 1882.

PRESENT :—All the Members.

On the subject of the Assistant Agencies at Kalutara and Negombo a debate took place.

The Hon. W. W. Mitchell moved that these Assistant Agencies be reduced to the 4th class of the Service.

Ayes.	*Noes.*
The Hon A. L. De Alwis,	The Government Agent, Western Province,
„ F. M. Mackwood,	The Treasurer.
„ W. W. Mitchell,	
„ P. Ráma-Náthan,	
„ J. VanLangenberg.	

The Government Agent, Central Province, the Auditor-General, and the Lieutenant-Governor abstained from voting.

The Government Agent, Western Province, and the Treasurer then withdrew their votes —Motion carried.

It was then resolved that notwithstanding this motion the matter should be still open to discussion on reconsideration of the Western Province Establishments.

2.

[On the 15th November the Acting Surveyor-General and the Hon. E. J. Young were added to the Committee.]

Tuesday, 5th December, 1882.

PRESENT :—All the Members save the Hon. P. Ráma-Náthan.

I.- ESTABLISHMENTS.

1.—CIVIL.

HIS EXCELLENCY THE GOVERNOR.

Mr. Mackwood moved that on the occurrence of a vacancy this salary be reduced to Rs. 70,000 a year. The committee divided :—

Ayes.	*Noes.*
The Hon. E. J. Young,	The Government Agent, Central Province,
„ A. L. De Alwis,	The Government Agent, Western Province,
„ W. W. Mitchell,	The Auditor-General,
„ F. M. Mackwood,	The Treasurer.
„ J. VanLangenberg,	
The Surveyor-General,	
The Lieutenant-Governor.	

Ayes, 7 ; Noes, 4 ; Majority 3.—Motion carried.

3.

The Hon. E. J. Young then moved :—"That on vacancies occurring, the salaries of the officers in the Public Service be reduced by the 20 per cent. increase allowed in 1878."

The Auditor-General moved as an amendment :—"That if retrenchment by means of reduction of salary be found unavoidable, it be effected by a *pro rata* reduction of all salaries over Rs. 3,000 a year, such reduction to be made as vacancies occur."

The committee divided on the amendment :—

Ayes.	*Noes.*
The Government Agent, Central Province,	The Hon. E. J. Young,
The Government Agent, Western Province,	„ A. L. De Alwis,
The Treasurer,	„ W. W. Mitchell,
The Auditor-General.	„ F. M. Mackwood,
	„ J. VanLangenberg,
	The Surveyor-General,
	The Lieutenant-Governor.

Ayes, 4 ; Noes, 7 ; majority 3.—Amendment lost.

4.

The motion was then put to the vote :—

Ayes.	*Noes.*
The Hon. E. J. Young,	The Surveyor-General,
„ A. L. De Alwis,	The Government Agent, Central Province,
„ W. W. Mitchell,	The Government Agent, Western Province,
„ F. M Mackwood,	The Treasurer,
„ J. VanLangenberg,	The Auditor-General.
The Lieutenant-Governor.	

Ayes, 6 ; Noes, 5 ; Majority 1.—Motion carried

5.

PROVINCIAL AGENCIES.

WESTERN PROVINCE.

Subsequent resolutions having altered the position of offices in the Western Province, the committee resolved to treat the resolution of the 26th October, respecting the Assistant Government Agentships of Kalutara and Negombo as cancelled.

The Hon. F. M. Mackwood then moved the reduction of the Assistant Agency, Kalutara, to the 4th class of the Service.

The committee divided :—

Ayes.	*Noes*
The Hon. E. J. Young,	The Surveyor-General,
„ A. L. De Alwis,	The Government Agent, Central Province,
„ W. W. Mitchell,	The Government Agent, Western Province,
„ F. M. Mackwood,	The Treasurer,
„ J. VanLangenberg.	The Auditor-General,
	The Lieutenant-Governor.

Ayes, 5 ; Noes, 6.—Motion lost.

6.

Wednesday, 6th December, 1882.

PRESENT :—All the Members save the Hon. P. Ráma-Náthan.

The Government Agent, Western Province, moved that the committee should go back to the Western Province for reconsideration of its resolutions.

The committee divided :—

Ayes.	*Noes.*
The Government Agent, Western Province.	The Hon. E. J. Young.
	„ A. L. De Alwis.
	„ W. W. Mitchell.
	„ F. M. Mackwood.
	„ J. VanLangenberg.
	The Surveyor-General.
	The Government Agent, Central Province.
	The Treasurer.
	The Auditor-General.
	The Lieutenant-Governor.

Ayes, 1 ; Noes, 10 ; Majority, 9.—Motion lost.

7.

NORTH-WESTERN PROVINCE.

The Lieutenant-Governor made the following motion :—

"That the North-Central Province be amalgamated with the North-Western, and that the administrative establishment of the combined Provinces should consist of a Government Agent, one Assistant Agent in the second class, one in the third class, and an Office Assistant."

The committee divided :—

Ayes.	*Noes.*
The Hon. E. J. Young.	The Government Agent, Central Province.
„ A. L. De Alwis.	
„ W. W. Mitchell.	
„ F. M. Mackwood.	
„ J. VanLangenberg.	
The Surveyor-General.	
The Government Agent, Western Province.	
The Treasurer.	
The Auditor-General.	
The Lieutenant-Governor.	

Ayes, 10; Noes, 1; Majority, 9.—Motion carried.

8.

SOUTHERN PROVINCE.

The Hon. F. M. Mackwood moved: "That the Assistant Agency at Hambantota should be reduced to the third class of the Service.

The committee divided :—

Ayes.	*Noes.*
The Hon. E. J. Young.	The Surveyor-General.
,, A. L. De Alwis.	The Government Agent, Central Province.
,, W. W. Mitchell.	The Government Agent, Western Province.
,, F. M. Mackwood.	The Treasurer.
,, J. VanLangenberg.	The Auditor-General.
	The Lieutenant-Governor.

Ayes, 5 ; Noes, 6 ; Majority, 1.—Motion lost.

9.

EASTERN PROVINCE.

The Lieutenant-Governor moved to abolish the post of Assistant Collector of Customs and Master Attendant, Trincomalee, and to reduce the District Judgeship, Batticaloa, to the third class of the Service.

The committee divided :—

Ayes.	*Noes.*
The Hon. E. J. Young.	The Government Agent, Central Province.
,, A. L. De Alwis.	The Auditor-General.
,, W. W. Mitchell.	
,, F. M. Mackwood.	
,, J. VanLangenberg.	
The Surveyor-General.	
The Government Agent, Western Province.	
The Treasurer.	
The Lieutenant-Governor.	

Ayes, 9 ; Noes, 2 ; Majority, 7.—Motion carried.

The Auditor-General desired to place on record that his reason for voting against the motion was that, in his opinion, it was not desirable to reduce the class of the District Judgeship of Batticaloa. In other respects he was of opinion that the alterations proposed were desirable.

10.

Thursday, 7th December, 1882.

PRESENT :—All the Members save the Hon. P. Ráma-Náthan.

The Lieutenant-Governor moved that on the occurrence of a vacancy the pay of the Director of Public Works should be reduced to Rs. 12,000 a year.

The committee divided :—

Ayes.	*Noes.*
The Hon. E. J. Young,	The Surveyor-General,
,, A. L. De Alwis,	The Government Agent, Central Province,
W. W. Mitchell,	The Government Agent, Western Province,
F M. Mackwood,	The Treasurer,
J. VanLangenberg,	The Auditor-General.
The Lieutenant-Governor.	

Ayes, 6 ; Noes, 5 ; Majority 1.—Motion carried.

11.

The Hon. W. W. Mitchell moved : "That the franking of correspondence and parcels by each department be discontinued, and that each department be required to pay its own postage."

The Government Agent, Central Province, moved the following amendment :—

"That a reasonable charge for carrying official postage be credited to the Postal Department with a view of ascertaining how far the Post Office pays its cost."

The committee divided on the amendment :—

Ayes.	*Noes.*
The Hon. A. L. DeAlwis,	The Hon. E. J Young,
,, J. VanLangenberg,	,, W. W. Mitchell,
The Surveyor-General,	,, F. M. Mackwood.
The Government Agent, Central Province,	
The Government Agent, Western Province,	
The Treasurer,	
The Auditor-General,	
The Lieutenant-Governor.	

Ayes, 8 ; Noes, 3 ; Majority 5.—Amendment carried.

12.

The Government Agent, Central Province, moved the following motion :—

"That the total expenditure by Government on education be limited to Rs. 300,000 a year by reductions of Rs. 100,000 a year for two years, and that any further expenditure be met by fees and by local

cess or local contributions, and so far as this reduction of expenditure may affect grants-in-aid, that such grants be reduced *pro rata*, and that reductions be fairly distributed over the two systems of Government schools and grants-in-aid schools."

The committee divided :—

Ayes.	*Noes.*
The Hon. E. J. Young,	The Hon. A. L DeAlwis,
The Surveyor-General,	„ W. W. Mitchell,
The Government Agent, Central Province,	„ F. M. Mackwood,
The Government Agent, Western Province,	„ J. VanLangenberg.
The Treasurer,	
The Auditor-General,	
The Lieutenant Governor.	

Ayes, 7 ; Noes, 4 ; Majority, 3.—Motion carried.

13.

MEDICAL DEPARTMENT.

The Government Agent, Central Province, moved: "That the medical expenditure for all classes now amounting to Rs. 694,000 be reduced to Rs. 550,000," [and that to meet these charges an export duty be levied on the terms of Sir Henry Ward's Act, estimated to raise about Rs. 490,000.]

The Lieutenant-Governor having ruled that the latter part of the motion was beyond the scope of the functions of the committee, it was withdrawn, and the committee divided on the first part of the motion :—

Ayes.	*Noes.*
The Government Agent, Central Province.	The Hon. E. J. Young,
	„ W. W. Mitchell,
	„ F. M. Mackwood,
	„ J. VanLangenberg,
	The Surveyor-General,
	The Government Agent, Western Province,
	The Treasurer,
	The Auditor-General,
	The Lieutenant-Governor.

Ayes, 1 ; Noes, 9 ; Majority 8.—Motion lost.

The committee adjourned till Friday, the 8th December, at 2 P.M.

14.

Friday, 8th December, 1882.

PRESENT.—All the Members save the Government Agent, Western Province, and the Hon. Messrs. VanLangenberg and Ráma-Náthan.

INTEREST.

The Government Agent, Central Province, moved: "That the Municipality of Colombo be required to pay the interest on the expenditure on the Colombo Waterworks while under construction."

The committee divided :—

Ayes.	*Noes.*
The Government Agent, Central Province.	The Hon. E. J. Young,
	„ A. L. De Alwis,
	„ W. W. Mitchell,
	„ F. M. Mackwood,
	The Surveyor-General,
	The Treasurer,
	The Auditor-General,
	The Lieutenant-Governor.

Ayes, 1; Noes, 8; Majority, 7.—Motion lost.

15.

Monday, 11th December, 1882.

PRESENT:

The LIEUTENANT-GOVERNOR,	The GOVERNMENT AGENT, Central Province,
The AUDITOR-GENERAL,	The SURVEYOR-GENERAL,
The TREASURER,	The Hon. J. VANLANGENBERG,
The GOVERNMENT AGENT, Western Province,	„ W. W. MITCHELL.

The Government Agent, Central Province, moved—

"That the Government contribution to the Police Band be discontinued."

The committee divided :—

Ayes.	*Noes.*
The Government Agent, Central Province.	The Hon. J. VanLangenberg,
	The Surveyor-General,
	The Government Agent, Western Province,
	The Treasurer,
	The Auditor-General,
	The Lieutenant-Governor.

Ayes, 1; Noes, 6; Majority, 5 ; Motion lost.

16.

Wednesday, 13th December, 1882.

PRESENT :—All the Members save the Hon. P. Ráma-Náthan and the Hon. F. M. Mackwood.

The committee then considered the papers referred to them by desire of the Governor.

The Hon. E J. Young moved :—

"That measures be adopted to throw on the people of the country some portion of the cost of public hospitals, and with this view, the tax on rice be raised to 50 cents per 100 lbs. and the proceeds placed to credit of the general medical account."

The Government Agent, Central Province, moved as an amendment :—

"That the proposal to alter the mode of collection of the import duties on rice and paddy should be adopted solely on its merits as a question of collection of revenue, and in no case should any increase of revenue from an alteration in the mode of collection be allowed to supersede any existing source of revenue."

The committee divided on the amendment :—

Ayes.	*Noes.*
The Hon. A. L. De Alwis,	The Hon. E. J. Young.
,, J. VanLangenberg,	,, W. W. Mitchell,
The Government Agent. Central Province,	The Surveyor-General,
The Government Agent, Western Province,	The Auditor General,
The Treasurer.	The Lieutenant-Governor.

Ayes, 5 ; Noes, 5 ; the votes being equal, the Lieutenant-Governor gave his casting vote as Chairman against the amendment.

17.

The committee then divided on the motion.

Ayes.	*Noes.*
The Hon. E. J. Young,	The Hon. A. L. De Alwis,
,, W. W. Mitchell,	,, J. VanLangenberg,
The Surveyor-General,	The Government Agent, Central Province,
The Auditor-General,	The Government Agent, Western Province,
	The Treasurer,
	The Lieutenant-Governor.

Ayes, 4 ; Noes, 6.—Motion lost.

18.

The Lieutenant-Governor then moved the following motion :—

"That the duty be imposed on kerosine oil as before in accordance with the recommendation of the Principal Collector of Customs."

The Hon. W. W. Mitchell moved the following amendment :—

"That as kerosine oil is now largely used, and as cheap light serves as an important element in the civilization of the people, it is undesirable to impose a Customs duty upon it, as this would tend to restrict the use of it and cause consumers to revert to cocoanut oil, and the revenue from kerosine would not then be obtained."

The committee divided on the amendment :—

Ayes.	*Noes.*
The Hon. W. W. Mitchell.	The Hon. E. J Young.
	,, A. L. De Alwis,
	,, J. VanLangenberg,
	The Surveyor-General,
	The Government Agent, Central Province,
	The Government Agent, Western Province,
	The Treasurer,
	The Auditor-General,
	The Lieutenant-Governor.

Ayes, 1; Noes, 9 ; Majority, 8.—Amendment lost.

The motion was then put and carried.

APPENDIX B.

INTERIM REPORT.

THE Select Committee having given careful consideration to the questions (1) of assigning to the Treasurer additional duties of corresponding importance to the high position of his office, (2) of the desirability of relieving the Government Agent of the Western Province of a portion of the duties imposed upon

him as Chairman of the Municipal Council of Colombo, and (3) of reducing the cost of the Customs Establishment, resolve to recommend —

That the duties of the Principal Collector of Customs be assigned to the Treasurer without increase of salary, and that there be in the Customs Department one Deputy-Collector and Landing Surveyor in the second class of the Service, and two Landing Surveyors in the fourth class.

The Committee consider that it should be possible, with the above staff, to make arrangements for relieving the Treasurer of much of the work of routine which now somewhat unduly occupies his time, also for the performance of the duties of the Secretary to the Loan Board.

That the posts of Warehousekeeper in the Customs and Secretary to the Loan Board be abolished.

That it is undesirable to sever the connection between the Agency of the Western Province and the Colombo Municipality, which is regarded by the committee as being beneficial to both institutions.

That the Negombo District be re-united to that of Colombo, the Assistant Agency being abolished as a separate appointment, and that an officer in the third class of the Civil Service be attached to the Colombo Kachchéri, who should assist the Chairman of the Municipality, and relieve the Government Agent of all work of detail connected with that institution. This officer would also assist the Government Agent in the administration of the enlarged home district.

The saving to be effected by the above changes, which will, it is considered, be accompanied by an increase in administrative strength, will amount to about Rs. 20,000. The Committee do not consider it to lie within their province to consider the question of personal claims which may be affected by their proposals.

J. DOUGLAS.
W. H. RAVENSCROFT.
W. D. WRIGHT.
J. VANLANGENBERG.
P. RA'MA-NA'THAN.
W. W. MITCHELL.
F. M. MACKWOOD.
A. L. DE ALWIS

Council Chamber,
Colombo, 15th November, 1882.

PROTEST.

THE GOVERNMENT AGENT, Western Province, to the CHAIRMAN of the Select Committee on Retrenchment.

Colombo, 18th November, 1882.

SIR,—ON taking my seat in the Legislative Council on Wednesday, I was surprised to see laid on the table a printed paper purporting to be an interim report made by the Select Committee on Retrenchment to the Legislative Council.

I was subsequently asked by the Secretary to the Committee to sign the report, which I declined to do.

As a Member of the Select Committee, I beg to enter on its records my respectful protest against the irregular manner in which this interim report has been drawn up and presented to Council. On the 24th October, a motion was brought forward in Committee, and carried, that the salaries of the Assistant Agencies of Negombo and Kalutara should severally be reduced from Rs. 7,200 to Rs. 4,500 per annum. After the motion was carried, it was agreed that the matter should be re-discussed when the question of reduction of salaries generally took place, the general question having, by consent, been held over.

On the 26th October, a resolution was carried to amalgamate the offices of Treasurer and Collector of Customs. The Chairman of the Committee then proposed to take a note from the savings thus effected to provide a salary for a Deputy-Chairman of the Municipality, but, at the request of an Unofficial Member, it was agreed that this should also stand over until the question of re-distribution of offices and salaries in the Western Province Agency was re-discussed.

On the 9th November, when the Committee adjourned, it was resolved that certain specified subjects should be taken up on Monday, 13th. The question of re-distribution of offices and salaries of the department of the Western Province Agency was not one of the subjects set down for discussion, nor was the question of making any interim report to the Legislative Council set down for consideration, or even hinted at.

On Monday, the 13th, finding that I was unable conveniently to attend the meeting of the Committee, and knowing that the questions set down for discussion were comparatively unimportant, I wrote to the Chairman requesting him to excuse my absence.

I never saw the draft of the interim report, nor had I the slightest notice whatever that any such report was to be proposed, discussed, adopted, or presented until it was laid before me, as a Member of the Legislative Council, on Wednesday.

It is not my intention to discuss now the questions raised in the interim report, beyond stating my entire disapproval and dissent from the proposals made in the 6th paragraph, which, in my opinion are calculated to create no financial economy, but to very injuriously affect the administration of the Colombo and Negombo Districts, and very inadequately to relieve the Municipality.

I beg that this protest against what I conceive to be a grave irregularity may be recorded in the proceedings of the Committee, and that a copy of it may be forwarded to His Excellency the Governor.

I am, &c.,
F. R. SAUNDERS,
Government Agent, Western Province, and M.L.C.

APPENDIX C.

SCHEDULE of Reductions noted or recommended by the Select Committee on Retrenchment in the different Departments of the Public Service.

		Rs.
20 per cent. increase on Salaries—say, nett	...	80,000
His Excellency the Governor	...	10,960
Secretariat ...	...	7,100
Treasury and Customs ...	...	17,000
Western Province ...	...	2,000
North-Western and North-Central Provinces	...	13,000
Southern Province ...	...	2,000
Eastern Province ...	...	6,000
Public Works Department ...	...	53,736
Postal-Telegraphs ...	...	3,000
Queen's Advocate ...	...	7,000
District Courts ...	...	4,800
Police Courts ...	...	6,300
Registrar-General and Fiscal	...	8,000
Public Instruction ...	...	138,000
Police and Prisons ...	...	15,000
Revenue Services ...	...	3,000
Administration of Justice ...	...	20,000
Transport ...	...	750
		397,646

Further recommendations have been made for retrenchment as regards the Medical Department, Pensions, and Military expenditure, but no definite amount can be noted in any case.

Additional Revenue.

Proposed alteration in Customs Tariff	...	201,650
Total improvement on Draft Estimates	...	Rs. 599,296

APPENDIX D.

The SECRETARY of the SELECT COMMITTEE on Retrenchment, to the Hon. the COLONIAL SECRETARY.

Council Chamber,
Colombo, 9th December, 1882.

SIR,—I AM directed by the Select Committee on Retrenchment to forward for the consideration of Government the annexed resolution, which was carried at a meeting on the 7th instant.

I am, &c.,

J. A. SWETTENHAM,
Acting Secretary.

Resolution referred to.

"That with a view to retrenchment combined with greater efficiency, the Government be requested to consider how the Public Service can best be improved on the basis of dividing Ceylon, for administrative purposes, into three Provinces, corresponding with the division of races, viz., Tamils, Kandyans, and Low-country Sighalese; and by employing European supervision over larger areas than at present, with a sufficient number of qualified natives of the country as subordinate officers in the Service."

The Hon. the COLONIAL SECRETARY to the SECRETARY of the SELECT COMMITTEE on Retrenchment.

Colonial Secretary's Office,
Colombo, 15th December, 1882.

SIR,—I AM directed to acknowledge the receipt of your letter of the 9th instant, and to state that the resolution will be laid, together with the report of the Retrenchment Committee, before the Secretary of State, without whose consent the Governor cannot propose so large a measure, affecting as it does many officers borne on the Fixed Establishment of the Colony.

I am, &c.,

J. A. SWETTENHAM,
for Colonial Secretary.

APPENDIX E.

RETURN showing the Population, Area, and Revenue of the several Revenue Districts of the Island, the Population showing the Number of Sinhalese, Tamils, Europeans, Burghers, and others.

Districts.	Population as shown by Census Return, 1882.					Total.	Area, from Blue Book.	Revenue for 1881.
	Sinhalese.	Tamils.	Europeans.	Burghers.	Others.			
Western Province.							Acres.	Rs. cts.
Colombo	314,286	32,194	1,290	9,242	32,776	389,788	358,960	*1,274,185 51
Negombo	102,050	11,476	38	477	2,650	116,691	141,520	325,244 83
Kégalla	109,088	5,407	40	82	5,338	119,955	392,320	149,135 82
Ratnapura . ..	94,799	9,018	96	126	1,835	105,874	928,000	185,598 45
Kalutara	149,526	1,938	74	479	13,004	165,021	320,000	258,818 69
North-Western Province.								
Kurunégala	197,379	7,425	50	259	10,060	215,173	834,880	201,390 73½
Puttalam	52,136	12,490	37	329	13,162	78,154	1,103,680	716,308 37
Southern Province.								
Galle	195,042	2,003	233	1,494	10,908	209,680	348,160	607,130 40
Mátara	145,245	1,162	30	324	5,162	151,923	316,160	196,543 17
Hambantota	69,141	690	17	161	1,908	71,917	568,960	235,055 79
Eastern Province.								
Batticaloa	5,012	61,014	65	758	38,509	105,358	1,583,600	319,557 62¼
Trincomalee	935	14,394	74	361	6,433	22,197	662,800	124,068 91
Northern Province.								
Jaffna	80	261,902	122	615	2,864	265,583	546,560	583,703 12
Mannár	142	14,415	11	122	6,658	21,348	270,080	679,105 6
Mullaittívu	116	7,036	1	59	426	7,638	594,560	33,682 34
Vavúniyan-Viláṇkulam ...	1,041	6,128	2	18	742	7,931	604,800	13,822 41
Central Province.								
Kandy	154,916	104,012	1,263	2,213	25,928	288,332	558,080	649,153 10
Mátalé	52,845	26,960	194	239	6,417	86,655	579,200	110,232 99
Badulla	113,827	43,576	351	272	7,666	165,692	2,324,480	266,254 59
Nuwara Eliya	35,602	59,344	318	221	2,697	98,682	231,040	251,674 19
North-Central Province.								
Anurádhapura	53,406	4,664	30	35	8,011	66,146	2,541,440	78,939 22
Total ..	1,846,614	687,248	4,836	17,886	203,154	†2,759,738	15,809,280	7,259,525 31¾

Audit Office,
Colombo, January, 1883.

W. H. RAVENSCROFT,
Auditor-General.

APPENDIX F.

EXTRACT from the Minutes of the Committee, dated December 6th, 1882.

Resolved: "That the Government Agents of the Western and Central Provinces be requested to place before the Committee the schemes for the redistribution of Provincial Agencies which they are understood to have prepared; and that in the meantime the question of retrenchment in the Agencies be proceeded with on the understanding that the decisions respecting them are open to reconsideration, if desired, when the abovementioned schemes are brought before the Committee."

Reply of the Government Agent, Central Province.—(January 22nd, 1883.)

The Government Agent of the Central Province is fully sensible of the honor done him by the Committee in asking him to place before it the scheme which he has prepared, but he begs to be excused from placing it before the Committee.

He has drawn up a scheme, not for the re-distribution of Provincial Agencies, but for the re-organization and improvement of the Civil Service, Revenue and Judicial; and he considers that such a scheme is matter rather for the consideration of the Governor and the Secretary of State than for that of the Committee.

He may, however, state that his scheme would cost more than the Establishments as proposed to be reduced by the Committee.

For *Reply of the Government Agent, Western Province*, see paragraph 13 of his memorandum on page 19.

* This amount includes the sum of Rs. 395,302·26 collected by the Treasurer on account of General and Postage Stamps, Postal collections, and Fines and Forfeitures.

† The total population as given is exclusive of the Military and Shipping.

XXXIX.—1882.

VILLAGE TRIBUNALS.

A STATEMENT

SHOWING

THE DISTRICTS, PRESIDENTS, THEIR SALARIES AND STAFFS, AND THE NUMBER AND THE NATURE OF THE CASES DISPOSED OF DURING THE YEAR.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

RETURN showing the Names of Districts, Presidents, &c., and the Number of Cases instituted, decided, and in Appeal, under "The Village Communities Ordinance," throughout the Island, for the year 1881.

Districts.	Presidents.	Salaries.	Staff.	Cost of Staff per Annum.	Institutions.			Decisions.										Appeals.			
										Civil.			Criminal.					To Government Agent.		From G. A. to Governor and Ex. Council.	
					Civil.	Criminal.	Amicable Settlements under section 23.	Breaches of V. C. Rules.	Irrigation.	Money.	Land.	By Consent.	Assault.	Theft.	Malicious Injury.	Cattle Trespass.	Maintenance.	Miscellaneous.	Confirmed.	Set aside.	Confirmed.	Set aside.
Western Province.																					
Alutkuru-kóralé South.				Rs.																	
Gampaha ..	J. M. P. Pieris, Mudaliyár of the Governor's Gate	Rs. 1,800 per annum including travelling allowance.	4 Native Writers at Rs. 20 each, 4 Messengers at Rs. 10 each, 3 Sweepers at Rs. 5 each, and 1 Sweeper at Rs. 3 per month.	1,656	329	250	62	44	11	327	2	4	77	69	44	—	5	—	5	4	—	—
Kanuwana ..					452	449	30	95	—	410	7	—	164	102	17	5	6	—	17	3	—	—
Ambatalenpahala ...					112	143	29	55	16	70	17	1	29	15	13	6	1	—	7	2	1	—
Wattala ...					121	192	36	74	6	84	25	—	65	33	14	2	—	—	3	—	1	—
Hewágam-kóralé.																					
Hanwella ...	L. C. F. Samanackody, Mudaliyár ...	Rs. 1,600 including travelling expenses.	3 Native Writers at Rs. 20 each, 2 Messengers at Rs. 10 each, and 3 Sweepers at Rs. 5 each per month.	1,140	316	367	43	177	2	261	8	—	102	67	2	37	10	—	8	2	—	—
Nawagomuwa ...					207	227	32	59	—	180	1	—	80	76	—	21	3	—	5	1	—	—
Mulleriyáwa ...					65	95	9	18	—	48	—	—	29	42	—	13	—	—	3	—	—	—
Salpiti-kóralé.																					
Gaṇgoḍawila ...	D. A. A. Wijayasinha, Mudaliyár ...	Rs. 1,000, and Rs. 500 travelling allowance.	1 Native Writer at Rs. 20, 1 Messenger at Rs. 10, and 2 Process Servers at Rs. 10 each per month.	600	489	881	164	224	10	452	—	64	271	238	12	106	2	165	15	2	—	1
Adikári and Meda-pattus of the Siyané-kóralé.																					
Henaratgoḍa ...	D. A. E. Dias Bandaranayaka	Rs. 1,600 including travelling allowance.	2 Native Writers at Rs. 20 each, 2 Messengers at Rs. 10 each, and 1 Sweeper at Rs. 5 per month.	780	897	565	293	100	—	715	4	5	167	133	2	—	18	—	2	—	—	—
Mahara ..					495	557	218	143	—	432	—	—	165	105	11	3	6	—	5	1	—	—
Negombo.																					
Minuwangoḍa ...	Adrian De Silva ...	Rs. 1,200, and Rs. 300 travelling allowance.	1 Native Writer at Rs. 25, 1 Messenger at Rs. 10, 1 Cattle Registrar at Rs. 15, 1 Gansabáwa A'rachchi from July, 1881, at Rs. 5 per month.	630	1174	1000	257	196	—	952	—	—	178	243	16	122	8	23	66	19	18	6
Kégalla.																					
Máwanella ..	L. B. Kobbekaduwe ...	Rs. 1,000 and Rs. 500 travelling allowance.	4 Native Writers at Rs. 20 each, 4 Messengers at Rs. 10 each, and 5 Sweepers at Rs.* —	1,690	1082	857	128	295	23	1142	72	2	147	171	67	119	30	—	50	9	2	—
Rambukkana ...					848	799	179	262	27	825	66	—	94	168	43	175	23	—	37	2	—	—

Dehiówiṭa ...	J. C. Molamura ...	Do.	—	—	716	597	153	35	2	607	109	—	20	39	3	8	1	—	15	7	1	—
Ruanwella ...					220	155	78	16	—	177	43	—	15	13	1	9	1	—	5	2	—	—
Bulatkohopiṭiya ...					182	121	36	9	—	146	36	—	6	13	1	2	2	—	1	—	—	—
Ratnapura.																							
Higgashéna ...	E. F. Mapitigama ...	Rs. 1,000 and Rs. 500 travelling allowance.	1 Native Writer at Rs. 20, and 1 Messenger at Rs. 10 per month.	360	551	544	96	206	6	539	—	82	61	135	16	79	2	—	34	11	1	—
Minnana ...					503	276	74	123	2	525	1	31	24	63	13	60	2	—	8	2	—	—
Kiriella ...					126	159	36	67	—	169	—	30	8	43	3	27	4	—	7	3	—	—
NORTH-WESTERN PROVINCE.																							
		Rs.																					
Wé-uḍawilli-hatpattu ...	J. C. Amarasekara ...	800†	1 Clerk, 2 Messengers and 1 Court-keeper ...	510	1828	825	764	205	—	1777	35	—	117	140	5	429	22	—	34	11	—	—
Wanni-hatpattu ...	C. H. Moonamale ...	800†		510	2163	1167	650	580	1	620	50	506	84	67	9	163	39	—	22	2	—	—
Dewamédi-hatpattu ...	S. E. Herat ...	800†		510	1916	726	133	91	1	1630	43	733	85	108	10	419	12	—	28	5	—	—
Katugampola-hatpattu ...	R. B. W. Moonamale ...	800†		510	3095	1057	1682	230	—	2801	61	—	109	153	25	353	28	—	9	5	—	—
Hiriyala-hatpattu ...	Dodanwela Banda ...	800†		510	1001	516	143	76	—	985	38	105	66	64	10	261	23	—	13	3	1	—
Dambadeni-hatpattu ...	J. H. Halpe ...	800†		510	1898	1159	831	152	—	1582	26	—	87	160	8	499	22	—	19	5	1	—
Demala-hatpattu of the Puttalam District ...	—	800, and for 5 months Rs. 75 paid at Rs. 15 per month from fines.	1 Messenger ...	...	459	129	102	48	—	502	2	121	26	14	—	56	4	—	1	—	—	—
SOUTHERN PROVINCE.																							
Galle.																							
Bentoṭa Walalláwiṭi-kóralé	E. Jayatileke ...	Rs. 1,100 and Rs. 360 travelling allowance.	1 Clerk and 2 Peons ...	510	1022	726	497	301	—	1320	1	—	304	211	53	59	7	—	43	22	—	—
Hinidum-pattu and Mapalagama	A. R. Senewiratna ...	Rs. 1,000, and Rs. 360 travelling allowance.	do. do. ...	600	514	334	115	75	—	486	40	4	93	92	13	31	14	—	37	2	4	—
Mátara.																							
Wéligam-kóralé ...	R. A. Dunuwila ...	Rs. 1,100, and Rs. 360 travelling allowance.	do. do. ...	420	1227	1350	478	107	—	1223	5	34	727	452	33	—	31	—	70	7	2	—
Wéllaboḍa-pattu ...	J. D. C. Perera ...	Rs. 840, and Rs. 300 travelling allowance.	do. do. ...	420	1165	1114	503	208	17	762	72	—	243	242	28	32	58	—	103	23	3	2
Gaṇgaboḍa-pattu ...	F. de Silva Abewardana ...	Rs 840, and Rs. 300 travelling allowance.	do. do. ...	420	1161	953	196	343	—	974	47	9	246	233	7	23	31	—	71	14	1	—
Morowak-kóralé ...	C. A. Senewiratne ...	Rs. 1,100, and Rs. 360 travelling allowance.	do. do. ...	420	736	508	256	116	26	444	66	8	105	77	13	30	18	—	38	17	2	1
EASTERN PROVINCE.																							
		Rs.																					
Batticaloa North ...	J. Somanader, Mudaliyár	1,200 ...	4 Clerks and 2 Messengers	780	2901	1047	962	217	—	3126	11	207	135	115	9	45	114	—	7	1	—	—
Batticaloa South ...	Ebenezer Crowther ...	1,200 ...	4 Clerks and 2 Messengers	900	3412	653	862	150	—	3213	—	330	96	87	12	40	39	—	4	—	—	—
Trincomalee ...	M. Nannamuttu ...	1,000 ...	3 Clerks and 2 Messengers	720	1339	593	904	216	—	1301	—	190	136	50	39	47	13	—	6	2	1	—
Koḍḍiar-pattu ...																							
Kaḍḍukkulam-pattu ..																							
Tampalakam-pattu ...																							
CENTRAL PROVINCE.																							
Kandy.																							
Uḍunuwara ...	Kuda Banda Kobbekaduwe	1,320 ...	1 Clerk, 3 peons and 1 coolly in charge of the Gansabawa Court house	810	401	589	223	79	28	225	127	49	104	80	95	40	10	—	23	10	—	—

* The service of the Village Tribunal-keeper, Ruanwella, discontinued from September, 1881, until the completion of the new Gansabáwa Court.—Salary, 5 rupees per month.
† The Presidents also draw a sum of 360 rupees as travelling allowances.

Districts.	Presidents.	Salaries.	Staff.	Cost of Staff per annum.	Institutions. Civil.	Institutions. Criminal.	Amicable Settlements under section 23.	Decisions. Breaches of V. C. Rules.	Decisions. Irrigation.	Decisions. Civil. Money.	Decisions. Civil. Land.	Decisions. Civil. By Consent.	Decisions. Criminal. Assault.	Decisions. Criminal. Theft.	Decisions. Criminal. Malicious Injury.	Decisions. Criminal. Cattle Trespass.	Decisions. Criminal. Maintenance.	Decisions. Criminal. Miscellaneous.	Appeals. To Government Agent. Confirmed.	Appeals. To Government Agent. Set aside.	Appeals. From G. A. to Governor and Ex. Council. Confirmed.	Appeals. From G. A. to Governor and Ex. Council. Set aside.
Central Province—*contd.*																						
Kandy—contd.		Rs.		Rs.																		
Páta Dumbara ...	C. B. Nugawela ...	1,698 ...	2 Clerks and 3 Peons ...	930	1493	1677	112	917	20	1568	23	135	349	147	116	107	46	—	61	12	1	—
Uḍa Dumbara ...					556	504	49	314	1	666	16	69	86	52	49	59	31	—	15	6	—	—
Badulla.																						
Uḍukinda ...	H. E. Dambawinna ...	Rs. 1,219 and 92 cents.	1 Clerk and 2 Messengers	540	372	279	105	59	12	270	4	—	27	14	8	19	14	—	6	1	—	—
Mátalé.																						
Mátalé North ...	W. A. Dullewe ...	1,200 ...	1 Clerk and 2 Peons ...	540	1093	536	385	209	—	804	66	16	89	62	14	56	6	—	30	8	—	—
Mátalé East ...	Senewiratna Ratwatte ...	1,200 ...	do. do. ...	540	1126	699	160	—	—	836	16	223	375	80	16	95	32	—	15	—	—	—
Nuwara Eliya.																						
Walapone ...	T. B. Madugalla ...	1,320 ...	2 Clerks and 1 Peon ...	630	247	294	90	30	—	238	5	—	76	32	8	118	7	—	5	7	—	—
Uḍa Héwahęta ...					709	414	158	77	—	654	4	—	142	60	13	93	9	—	9	4	—	1
Kotmalé ...	W. D. Banda ...	1,320 ...	1 Clerk and 1 Peon ...	390	257	303	100	128	5	237	4	—	106	40	15	15	10	—	—	1	—	—
North-Central Province.																						
Nuwaragam Palata ...	T. B Timbiriwewe ...	1,500 ...	1 Clerk, 2 Messengers and 6 Court keepers ..	540	767	572	389	234	37	740	25	—	54	5	8	154	37	—	16	4	—	—
Hurulu Palata ...	E. Loku Banda ...	1,500 ...	do. do. ..	504	423	480	93	352	40	395	27	1	27	6	8	68	19	—	20	13	—	—
Kalagan Palata ...	D. Ukku Banda ..	1,500 ...	1 Clerk, 2 Messengers and 7 Court keepers ...	486	336	581	256	316	14	227	9	100	46	16	12	169	6	—	14	3	—	—
Tamankaduwa ...	E. M. de Costa* ...	780 ...	1 Clerk, 2 Messengers and 3 Court keepers ...	478·25	220	74	—	28	—	270	—	—	29	4	1	—	2	—	2	—	—	—

* Receives as Ratémahatmaya of Tamankaduwa 720 rupees per annum.

XL.—1882.

COLOMBO HARBOUR DUES.

REPORT

OF A

SELECT COMMITTEE OF THE CHAMBER OF COMMERCE

APPOINTED TO EXAMINE

THE RETURNS OF ESTIMATED HARBOUR REVENUE

AS FORMULATED IN

SESSIONAL PAPER No. XXXI. OF 1882.

Ordered by the Legislative Council to be Printed.

COLOMBO:

FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

COLOMBO HARBOUR DUES.

THE Select Committee appointed by the Chamber of Commerce to examine the Returns of Estimated Harbour Revenue as formulated in Sessional Paper No. XXXI. of 1882, report as follows: –

Port Dues.—Taking the actual number of vessels that arrived in the year ending 31st December, 1881, as furnished by the Master Attendant, there does not appear to have been any allowance made for overtime for vessels remaining in port over 96 hours or 280 hours, and the omissions have to be added as follows:—

Port Dues, 1881, tonnage at new rate	Rs. 46,362	50
Overtime ,, ,, to be added	,, 5,156	25
Total for 1881...	Rs. 51,518	75

The Port Dues collected in four months, 1882, were:—

		Add overtime.	
July	Rs. 5,310 0 +	Rs. 450 0 =	Rs. 5,760 0
August ...	5,787 50 +	513 75 =	6,301 25
September ...	5,935 0 +	617 50 =	6,652 50
October ...	7,400 0 +	675 0 =	8,075 0
Four months together			Rs. 26,788 0
For one year multiply by ...			3
Gives ...			Rs. 80,364 0
Additional, as compared with 1881 ...			Rs. 28,846 0

The estimated Port Dues for 1883 are thus shown to be	Rs. 80,364	0
Tonnage Dues, Inwards.—The actual imports of merchandise in 1881, as stated in the return under review, are given as 252,500 tons, but taking coals for 1883 at 118,000 tons, basing the calculation on quantities *actually shipped from July to October*, 1882, inclusive, and adding Government stores, railway materials, &c., which appear to have been omitted, the tonnage for 1883 is brought up to 369,292 tons, and the dues derivable therefrom to	79,635	50
Outwards.—The export tonnage dues appear to have been calculated upon the ton of 20 cwts. in many cases, instead of upon the number of shipping tons on which freight is payable.		
The coffee export for 1883 being put at 200,000 cwts., tea at 1,000,000 lbs., and cinchona at 5,000,000 lbs, the estimated revenue for 1883 may be taken as ...	15,424	25
Harbour and Warehouse Dues have been reckoned on the quantities actually imported and exported in 1881, with the exceptions abovementioned for 1883, and the receipts may be expected to be for ... *Imports* ...	129,655	98
Exports ...	25,924	61
To this have to be added the charges that would accrue upon goods remaining beyond the limit of five days	4,000	22
Also dues for goods landed for transhipment exceeding the five days ...	5,796	0
Imports exported, the dues on which amount to	7,379	0
And on goods, &c., coastwise	5,000	0
the Committee accept as given in the returns, not having any means of checking them.		
The total amount of dues of all kinds that may thus be reasonably looked for in .. 1883 is	Rs. 353,180	31

and, from the careful manner in which the estimate has been framed, the Committee fully expect to see this exceeded, especially as no allowance has been made for the gradual increase of tonnage that will be attracted to the port of Colombo.

An abstract of the estimated revenue, framed upon the same lines as the one compiled by Government, is annexed.

W. W. MITCHELL.
F. W. BOIS.
F. BAYLEY.
J. J. GRINLINTON.
E. AITKEN.

PORT, HARBOUR, AND WAREHOUSE DUES AT COLOMBO.

STATEMENT made out to contrast with that of the Collector of Customs in his letter to Government, No. 78 of 13th November, 1882.

	Tons.	Tons.	Rs.	cts.	Rs.	cts.
PORT DUES	—	—	—		51,518	75*
Inwards Tonnage of Cargo.	—	369,292				
Of Goods from India in B. I. Steamers and in Vessels under 200 tons (say) ...	203,000					
Of which (say) half in Vessels under 200 tons	101,500	101,500				
		267,792				
Thus, 101,500 tons at 12½ cts. per ton			12,687	50		
267,792 tons at 25 „			66,948	0		
					79,635	50
EXPORT TONNAGE.						
Vessels under 200 tons, 4,474 tons at 12½ cts.			559	25		
Other vessels 59,460 tons at 25 „			14,865	0		
					15,424	25
HARBOUR AND WAREHOUSE DUES.						
Imports			—		129,655	98
Exports			—		25,924	61
					302,159	9
IMPORTS RE-EXPORTED.						
Assumed as per Collector of Customs' Returns :						
Tonnage Dues			1,074	0		
Harbour Dues			6,305	0		
					7,379	0
					309,538	9
COASTWISE			—		5,000	0
PORT DUES.						
Additional Amounts.						
Add further *Overtime* for vessels in Ports over the time allowed in attached Return, and for vessels exceeding those noted for 1881...			—		28,846	0†
Add for *Harbour & Warehouse Dues* for goods beyond five days...			—		4,000	22‡
Add Harbour & Warehouse dues for goods landed for *transhipment*			—		5,796	0
			Total ... Rs.		353,180	31

* Vide Return herewith on pages 3 and 4.

This result does not give sailing vessels credit for having remained in the harbour over 96 hours, whereas the great majority remained over that time and incurred double rates. Neither has credit been taken for any steamer having been in the harbour over 96 hours, whereas all Colliers remain over that time.

If these extra rates were added, the Port dues would amount to more than Rs 60,000.

† Taking the four months of July, August, September, and October, 1882, as a guide, the Port Dues would have been as follows :—

Total for twelve months as shown herein ...	Rs. 80,364·00	July ...	Rs. 5,760·00
Total as shown above	„ 51,518·98	August ...	„ 6,301·00
		September	„ 6,652·00
	* Rs. 28,846·00	October ...	„ 8,075·00
		Total of four months ...	Rs. 26,788·00
			3
Approximate total of twelve months			Rs. 80,364 00

‡ For Government Warehouse, taking half the rent for 1881 as a standard ... Rs. 4,653 22
„ „ „ .. „ 2,226 62
Wharf & Warehouse Co.'s premises, taking October, 1882, as standard ... „ 1,773·60

Rs. 4,000·22

Taking October, 1882, as a standard is exclusive of a considerable revenue which is derived from Harbour and Warehouse Dues on passengers' baggage inwards and outwards. In the Chamber of Commerce estimates the result of a year of prosperity were given.

No worse year than 1881 could have been taken by Government as a guide to future revenue.

The sum of Rs. 76,813 deducted in the Chamber of Commerce 1879 estimates for upkeep and repairs of wharves, &c., &c., need not be taken into account, inasmuch as the same *rents* are now levied as before in addition to the Harbour and Warehouse Dues.

STATEMENT showing the Port Dues collected at the Port of Colombo in 1881, and also according to the proposed Rates.

Tonnage Schedule		No. of Vessels. Cargo.	Ballast.	With part Cargo Coastwise.	Commuted.	Total Vessels.	Tonnage.	Inwards Amount. Rs.	cts.	Outwards Amount. Rs.	cts.	Total. Rs.	cts.	Total Number of Vessels.	Proposed rates with half-rate overtime added.		Amount. Rs.	cts.
To 50 tons ...	Vessels	62	1	3	—	66	2670	201	60	47	28	248	88	146	2	50	547	50
	Coastwise Vessels ...	20	1	—	59	80	1860	77	28	39	2	116	30		1	25		
50 to 100 tons	Vessels	581	1	1	—	583	42155	3180	38	1527	68	4708	6	654	5	0	4905	0
	Coastwise Vessels ...	32	2	—	37	71	3234	234	80	275	66	510	46		2	50		
100 to 150 ,,	Vessels	307	2	1	—	310	32625	2610	0	1338	24	3948	24	317	7	50	3566	25
	Coastwise Vessels ...	2	—	—	5	7	766	21	28	39	68	60	96		3	75		
150 to 200 ,,	Vessels	98	—	—	—	98	18648	1491	84	883	24	2375	8	104	10	0	1560	0
	Coastwise Vessels ...	6	—	—	—	6	903	126	0	72	96	198	96		5	0		
200 to 300 ,,	Vessels	27	—	1	—	28	6179	494	32	236	88	731	20	37 @	20	0	1130	0
	Steamers	—	1	—	—	1	266	—		—		—		and	10	0		
	Coastwise Vessels ...	—	—	—	9	9	1800	—		183	10	183	10	1 @	20	0		
300 to 400 ,,	Vessels	4	—	—	—	4	1467	117	36	205	44	322	80	5 @	30	0	255	0
														and	15	0		
	Steamers	—	—	1	1	2	702	183	0	—		183	0	1 @	30	0		
400 to 500 ,,	Vessels	1	4	3	—	8	3241	38	96	255	12	294	8	8 @	40	0	520	0
														and	20	0		
	Steamers	—	1	—	—	1	366	—		—		—		1 @	40	0		
500 to 700 ,,	Vessels	4	8	1	—	13	7583	186	72	509	44	606	16	13 @	50	0	1075	0
														and	25	0		
	Steamers	1	1	—	—	2	1183	40	40	54	24	94	64	2 @	50	0		
700 to 900 ,,	Vessels	8	—	1	—	9	6475	518	0	128	72	646	72	9 @	60	0	1230	0
	Steamers	4	1	—	—	5	4070	257	20	138	24	595	44	and	30	0		
	Mail Steamers ...	2	—	—	—	2	1648	100	0	100	0	200	0	7 @	60	0		
900 to 1100 ,,	Vessels	3	3	—	—	6	6101	240	48	240	48	480	96	6 @	70	0	2240	0
	Steamers	14	—	6	—	20	19639	1067	68	334	48	1402	16	and	30	0		
	Mail Steamers ...	3	—	—	—	3	3122	150	0	150	0	300	0	23	70	0		
1100 to 1300 ,,	Vessels	1	—	2	—	3	3151	100	8	80	64	180	72	3 @	80	0	3640	0
	Steamers	14	—	4	—	18	16573	1137	52	386	88	1524	40	and	40	0		
	Mail Steamers ...	14	—	9	—	23	29070	700	0	700	0	1400	0	41	80	0		
1300 to 1500 ,,	Steamers	17	—	2	—	19	27260	1835	4	697	28	2532	32	87	90	0	7830	0
	Mail Steamers ...	53	—	15	—	68	91248	2650	0	2600	0	5250	0					
1500 to 1800 ,,	Vessels	1	—	1	—	2	3375	132	88	136	12	270	0	2 @	100	0	9100	0
	Steamers	31	—	8	—	39	61477	3630	52	3392	28	6022	80	and	50	0		
	Mail Steamers ...	29	—	20	—	49	7698	1400	0	1700	0	3100	0	88 @	100	0		
Above 1800 ,,	Steamers	79	1	3	—	83	172535	13159	4	6740	96	19900	0	116	120	0	12920	0
	Mail Steamers ...	18	1	14	—	33	71032	850	0	1000	0	1850	0					
	Coasting Vessels ...	—	—	—	—	—	—	—		161	60	161	60					
										Total ... Rs.		60289	4	1671			51518	72

This result of Rs. 51,518·72 has been arrived at by only giving sailing vessels credit for the additional half-rate for having remained over 96; whereas, as a matter of fact, many sailing vessels incurred double rates by remaining over 288 hours. No credit has been taken for any steamers being here 96, whereas several were here discharging coal and goods over 96 hours.

In contrasting the statement of Port Dues for the months of July, August, September, and October, the Collector of Customs has not made any allowance for a single vessel having remained over 96 or 288 hours; whereas, as a matter of fact, all, or nearly all crafts under 500 tons remained 96 hours, and some probably over 288.

All the large colliers remained over 96 hours, and some over 288, so that, adding only half-rate for vessels under 500 tons for 96 hours, and taking no account at all of those over 288 hours, and adding a half and full rates for colliers only to the P. & O., B. I. Co., and Messageries—for these actually have to be in Port over the hours named—the results are as follows (and these results take no credit for several steamers, not colliers, which were here over 96 hours or four days):—

July. Rs.	cts.	August. Rs.	cts.	September. Rs.	cts.	October. Rs.	cts.
5,310	0	5,787	50	5,935	0	7,400	0
5,760	0	6,301	25	6,652	50	8 075	0
Rs. 450	0	513	75	617	50	675	0

August ...	513	75
September...	617	50
October ...	675	0
Total ... Rs.	2,256	25

of known omissions without taking in steamers (other than P. & O., Messageries, and B. I. colliers), and sailing vessels other than those colliers which remained over 288 hours, &c.

All coasting vessels and other crafts up to 500 tons assumed to be in harbour over 96 hours.

RETURNS of Port Dues from July to October amended, so as to include the amounts chargeable for vessels over 96 and 288 hours in Port.

	Total Vessels.	Amount by Collector. Rs.	cts.		Rs.	cts.
July ...	101 ...	5,310	0 ...	Add ½ rates for all vessels up to 500 tons which remained over 96 hours ...	470	0
To be added ...	— ...	235	0 ...		+ 235	0
1 sailing vessel ...	— ...	50	0 ...	500 to 700		
Steamer "Prince Soltykoff" over 96 hours ...	— ...	45	0 ...	1,100 to 1,300		
S.S. "Cameo," 41 days in July	— ...	120	0 ...	1,300 to 1,500 above 1,800		
		Rs. 5,760	0 ...	instead of Rs. 5,310.		
August ...	152 ...	5,787	50 ...	Add ½ for vessels	827	50
		413	75 ...	under 500 tons ...	413	75
S.S. "Castleton," 9 days ...	— ...	50	0 ...	1,500 to 1,800		
1 sailing vessel ...	— ...	50	0 ...	above 1,800		
		Rs. 6,301	25 ...	instead of Rs. 5,787·50.		
September ...	159 ...	5,935	0 ...	Add ½ for all vessels	845	0
		422	50	under 500 tons ...	422	80
Add ½ for 1 sailing vessel ...	— ...	25	0 ...	500 to 700		
Do. ...	— ...	30	0	700 to 900		
S.S. "Teviotdale," 26th August to 7th September ...	— ...	120	0 ...	above 1,800		
S.S. "Dunnottar Castle," 29th August to 16th September ...	— ...	120	0			
		Rs. 6,652	50 ...	instead of Rs. 5,935.		
October ...	— ...	7,400	0 ...	Add for all vessels under	670	0
		335	0 ...	500 tons ½ rates ...	335	0
2 sailing vessels ...	— ...	50	0 ...	500 to 700		
1 Do. ...	— ...	30	0 ...	700 to 900		
The "Landseer," 3rd to 26th October ...	— ...	90	0 ...	1,300 to 1,500		
S.S. "Hathersage," 16th to 25th October ...	— ...	50	0 ...	1,500 to 1,800		
S.S. "Tancarville," 27th September to 9th October ...	— ...	120	0 ...	above 1,800		
		Rs. 8,075	0 ...	instead of Rs. 7,400.		

XLI.—1882.

COLOMBO HARBOUR WORKS.

CORRESPONDENCE

RELATING TO THE

INSUFFICIENCY OF JETTY ACCOMMODATION AT THE WHARF.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

COLOMBO HARBOUR WORKS.

No. 1.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Right Hon. the Earl of KIMBERLEY.

Queen's House,
Colombo, 10th August, 1882.

No. 330.—*Miscellaneous.*

MY LORD,—I HAVE the honour to enclose herewith a copy of a letter addressed to the Government by the Wharf and Warehouse Company relative to the height above water-level of the pier now being constructed at the root of the Breakwater, which, it is alleged, apparently with much reason, is too high for landing goods from boats conveniently.

2. The Resident Engineer of the Colombo Harbour Works, to whom I referred the Company's letter, states that the pier in question was designed expressly for sailing vessels, and not for cargo boats, and suggests that if it is deemed desirable to alter the level, a reference should be made to the Consulting Engineer.

3. There is no doubt that the labour of landing cargoes from boats must be considerably increased by having to lift the goods five or six feet up from boats on to the pier. It is also to be considered that as the commerce of the Port is more and more concentrated in steamers, and large vessels which will not come alongside the pier, it is desirable that the pier should be so constructed as to be convenient for landing goods from boats, and I would ask that the correspondence be referred to Sir John Coode for his consideration as to the best mode of accomplishing this.

I have, &c.,
J. R. LONGDEN.

Enclosure No. 1 in No. 1.

The MANAGER, Wharf and Warehouse Company, Limited, to the Hon. the COLONIAL SECRETARY.

The Wharf and Warehouse Company, Limited,
Colombo, 14th July, 1882.

SIR,—ADVERTING to my letter of 2nd April, 1879, I am instructed by the Board of Directors of this Company to invite the attention of Government to the height of the stone pier erected near the new iron warehouse at the Wharf.

This pier is about eight feet above water-level, and as the gunwale of a loaded lighter is only about two to three feet above water-line (from the stern to "midship") it follows that if it be the intention to utilize the pier as a place for unloading cargo from boats it will involve a lift of from five to six feet, which, for bags of rice and such like cargo, which are generally lifted by hand, will entail great labour.

We find the present old jetty (which is about two feet lower than the new stone structure) too high for work.

I am, &c.,
J. J. GRINLINTON,
Manager.

Enclosure No. 2 in No. 1.

The RESIDENT ENGINEER, Colombo Harbour Works, to the Hon. the COLONIAL SECRETARY.

Colombo Harbour Works,
31st July, 1882.

SIR,—I HAVE the honour to acknowledge receipt of your letter No. 117, dated the 19th instant, with enclosure from the Manager of the Wharf and Warehouse Company, Limited (herewith returned), and to state that the depôt wharf wall referred to was expressly designed by Sir John Coode to receive sailing vessels to load and discharge the same alongside, and was not intended for use by means of the cargo boats now in use in the harbour. Should the Government, however, think it desirable that the level should be altered, I would recommend that before doing so reference be made to the Consulting Engineer.

I am, &c.,
JOHN KYLE,
Resident Engineer.

No. 2.

Governor Sir J. R. LONGDEN, K.C.M.G., to the Right Hon. the Earl of KIMBERLEY.

Queen's House,
Colombo, 31st August, 1882.

No. 375.—*Miscellaneous.*

MY LORD,—IN connection with my despatch by the last mail, No. 330 of the 10th instant, submitting for the consideration of Sir John Coode a representation from the Wharf and Warehouse Company, Limited, relative to the inconvenient height of the piers now being erected in connection with the Colombo Harbour Works, I now have the honour to forward a copy of a letter from the Chamber of Commerce in which they make a representation to the same effect, and I would suggest that the enclosed copy be sent to Sir John Coode in order that he may see that the inconvenience represented is more generally felt than might be inferred from my previous despatch.

2. There are two other questions raised in the letter of the Chamber: one relating to the insufficiency of jetty accommodation for passengers and cargo, which I have already dealt with, as will be seen by my reply to the Chamber enclosed, and the other relating to the insufficiency of the ground already reclaimed for the purpose of providing coaling accommodation, and suggesting that the reclamation be extended. On this latter subject I am making some enquiries which cannot be answered before the mail leaves; I must therefore defer for the present my remarks on this question.

I have, &c.,
J. R. LONGDEN.

Enclosure No. 1 in No. 2.

The SECRETARY, Ceylon Chamber of Commerce, to the Hon. the COLONIAL SECRETARY.

Ceylon Chamber of Commerce,
Colombo, 24th August, 1882.

SIR,—I AM directed by the Committee of this Chamber to submit for the consideration of Government the following resolution, which was unanimously passed at a special general meeting held on 16th instant, viz.:—

"That the attention of Government be called to the insufficiency of the present jetty accommodation for both passengers and cargo, and also to the want of sufficient ground for coal storage and other purposes, and that they be requested to continue the reclamation of the foreshore."

The Committee are convinced that if Government will enquire into the above wants they will at once see the necessity for their being at once supplied, so that, in the matter of coals, vessels may not arrive and find it impossible to buy coal owing to the fact that companies have taken up for their own requirements all the available space, and the Committee think this will assuredly be the fact unless more room is afforded. The consequence of such a state of affairs is obvious.

The Committee consider that the insufficiency of the jetty accommodation is too apparent to need comment.

I am further directed to invite the attention of Government to the height of the masonry pier now being erected, as, if the pier is intended for the purpose of landing cargo from boats, it is some three feet higher than necessary or convenient.

Trusting that Government will take these matters into their early consideration,

I have, &c.,
C. E. H. SYMONS,
Secretary.

Enclosure No. 2 in No. 2.

The Hon. the COLONIAL SECRETARY to the SECRETARY, Ceylon Chamber of Commerce.

Colombo, 28th August, 1882.

SIR,—WITH reference to your letter of the 24th instant, I am directed to acquaint you that considerable difficulty has been experienced in dealing with the subject of wharf accommodation, but that after much consideration it has been decided to remove the boats and stores of the Master Attendant to the root of the Breakwater and to fit up the present Master Attendant's jetty as a passengers' jetty, taking away also the present archway at the entrance to the Customs and widening the roadway so as to afford ample space for the ingress and egress of carriages. An estimate for these works has recently been sanctioned, and their early execution directed.

The question of the final arrangements in connection with the Breakwater Works will be brought under the consideration of the Legislative Council at an early date, but so far there has been nothing to show that the reclamation ground will not, when completed according to the present design, afford all the accommodation required for the purpose for which this reclamation was intended—the storage of coal. Only one application is at present before Government for land for this purpose, viz., from the British India Company, who have asked for further land in addition to that originally applied for by them and now leased to them.

It is true that two other applications have been received by Government for land on the reclamation, one from the Wharf and Warehouse Company for the storage of timber, and the other

from Captain Bayley for a site for an ice house ; but such purposes are outside those for which the reclamation was undertaken.

The question of the height of the masonry pier is at present under reference to Sir J. Coode, and when his report is received it will be communicated to the Chamber.

I am, &c.,
GEO. T. M. O'BRIEN,
for Colonial Secretary.

No. 3.

The Colonial Office to Governor Sir J. R. Longden, K.C.M.G.

No. 25.—*Ceylon.* Downing-street, 6th January, 1883.

Sir,—I am directed by the Secretary of State for the Colonies to transmit to you, in reply to your despatches No. 330 of the 10th of August last and 375 of the 31st of August, a copy of a letter from the Crown Agents enclosing one from Sir John Coode respecting the height of the pier at the root of the Colombo Breakwater.

I am, &c.,
ROBERT G. W. HERBERT.

Enclosure in No. 3.

The Crown Agents to the Colonial Office.

Downing-street, London,
28th December, 1882.

Sir,—With reference to your letters of the 20th and 28th of September last, I have the honour to transmit to you, for the information of the Earl of Derby, a copy of a letter which we have received from Sir John Coode respecting the height of the pier now being erected at the root of the Colombo Breakwater.

The tracing referred to is also enclosed.

I have, &c.,
E. E. BLAKE.

Sub-enclosure in Enclosure in No. 3.

Sir John Coode to the Crown Agents.

5, Westminster Chambers,
22nd December, 1882.

Gentlemen,—With reference to the correspondence forwarded with your letters of 21st September and 4th October last, I beg to say that the question raised as to the height of the pier in course of construction relates to the quay wall of the depôt wharf at the root of the Breakwater, marked A.B.C. on the enclosed trace.

This wharf, as explained by Mr. Kyle, was designed for the accommodation of sailing vessels, and also to form an abutment and starting point for the two jetties shown on the plan which accompanied my report of 30th September, 1878. I have indicated the position of these jetties by black dotted lines on the trace sent herewith. They have not as yet been sanctioned, but I observe from the correspondence that the Chamber of Commerce consider that the accommodation is at present insufficient for both passengers and cargo. In laying out the new works it was my aim to arrange the height of the depôt wharf so as to conform to that of the proposed jetties.

The finished level of the wall and wharf, as designed and now in course of execution, is seven feet above high water, and 9 feet above low water. If it is desired to utilize any portion of this wharf for loading and discharging lighters, I would recommend that this be done by forming a low level section, from D. to G. on the trace, being a length of 300 feet, sloping back the surface of the wharf over this length at 1 in 20 until the finished level abovenamed is reached.

It will be observed that the centre of this low wharfage comes opposite the site of the proposed No. 1 jetty. When this work is undertaken hereafter the portion from E. to F. would be raised to the full height, still leaving two lengths of low quayage from D. to E. and F. to G. available for lighters. The adoption of the above suggestion would not necessitate the alteration of any work which has been completed, the height of the wall in progress from D. to G. being below the reduced height described.

The abovenamed proposal would not materially affect the cost. There would be a slight saving on the quay wall which would be practically counterbalanced by the extra work on the wings D. and G. and the additional labour on the slope.

The spaces D. E. and F. G. could be raised to the full height, if required hereafter, so as to make the wall and wharf of an uniform level throughout its entire length from A. to C.

I consider the provision of low level berthage will be preferable under the circumstances, and more suited to native labour, than the adoption of cranes for lighting goods into and out of lighters lying alongside a quay of the full height required for vessels.

I have, &c.,
JOHN COODE.

XLII.—1882.

THE POSTAL SERVICE CONTRACT.

CORRESPONDENCE

ON THE SUBJECT OF

A PROPOSAL TO OBTAIN CONTRIBUTIONS FROM THE COLONIES TOWARDS THE COST OF THE POSTAL SERVICE.

Ordered by His Excellency the Governor to be Printed.

COLOMBO:
FRANK LUKER, ACTING GOVERNMENT PRINTER, CEYLON.

1883.

THE POSTAL SERVICE CONTRACT.

The Right Hon. the Earl of DERBY to Governor Sir J. R. LONGDEN, K.C.M.G.

No. 33.—*Ceylon.* Downing-street, 18th January, 1883.

SIR,—I HAVE the honour to forward, for the consideration of your Government, the enclosed copy of correspondence on the subject of a proposal made by the Lords of the Treasury that the colonies of Ceylon, the Straits Settlements, and Hongkong should contribute to make good the loss caused to the Imperial Government by the Postal Contract now in force.

I request you to lay these papers before your Legislative Council with an expression of the opinion of Her Majesty's Government that it is reasonable that the important colonies served by the present contract should contribute a moderate amount, as proposed, towards the heavy cost which it entails.

I have, &c.,
DERBY.

Enclosure No. 1.

The TREASURY to the COLONIAL OFFICE.

No. 8,747/79.

Treasury Chambers, 16th May, 1879.

SIR,—I AM directed by the Lords Commissioners of Her Majesty's Treasury to request that you will state to Secretary Sir Michael Hicks-Beach that my Lords have had under their consideration the question of obtaining from the colonies of Ceylon, the Straits Settlements, and Hongkong, some contribution towards the heavy expense entailed upon the Imperial Exchequer by the Packet Service by which their correspondence is conveyed.

Adverting to the material advantage which will be conferred on those colonies by the considerable acceleration which will take place in the conveyance of the mails between them and this country when the new contract with the Peninsular and Oriental Steam Navigation Company comes into operation on the 1st February next, my Lords have come to the conclusion that the time has now arrived when such a contribution may be fairly asked for. In communicating this conclusion to the Postmaster-General, they have requested his Lordship to favour them with his opinion as to the amount which each colony may, after the commencement of the new contract, be fairly called upon to contribute towards the expense of the service in question.

My Lords trust that the Secretary of State will concur with them in this matter, and they desire me to state that a further communication will be addressed to you when the report called for from the Post Office shall have been received.

I am, &c.,
HENRY SELWIN IBBETSON.

Enclosure No. 2.

The TREASURY to the COLONIAL OFFICE.

No. 10,047. Treasury Chambers, 9th June, 1880.

SIR,—WITH reference to the letter from this Board, 8,747 of 16th May, 1879, on the subject of obtaining contributions from the colonies of Ceylon, the Straits Settlements, and Hongkong towards the expenses entailed upon the Imperial Exchequer by the Packet Service by which their correspondence is conveyed, I am directed by the Lords Commissioners of Her Majesty's Treasury to acquaint you, for the information of the Secretary of State for the Colonies, that my Lords have now received a report from the Postmaster-General as to the amount of the proposed contributions.

The calculations are based upon the number of letters carried and the distance over which they are carried, and in accordance with this principle the amounts to be paid would be—by Ceylon, £2,721; by the Straits Settlements, £7,071, and by Hongkong, £13,771. The colonies would, should these terms be agreed to, be no longer charged with the moiety of the additional annual loss incurred in consequence of those colonies having joined the Postal Union.

My Lords would be glad to be favoured with any observations the Secretary of State may have to offer on this proposal.

I am, &c.,
WILLIAM LAW.

Enclosure No. 3.

The COLONIAL OFFICE to the TREASURY.

Downing-street, 26th June, 1880.

SIR,—I AM directed by the Earl of Kimberley to acknowledge the receipt of your letter of the 9th June, regarding the amount of contribution which, in the opinion of the Lords of the Treasury, should be paid by Ceylon, Hongkong, and the Straits Settlements, respectively, towards the loss incurred by the Postal Service by which those colonies are served.

2. Lord Kimberley is prepared to admit the justice of the principle that the total amount of loss should be shared in equal proportions between this country and the colonies concerned, although he regrets that this principle was not laid down and insisted upon at an earlier period; for the colonies have agreed to their postal arrangements under the conditions specified in the Treasury letter of 15th March, 1876, and it is reasonable to suppose that they might have been influenced in the decision then taken had they been aware of these further proposals.

3. A reference to the Post Office Memorandum dated 14th February, 1876, and enclosed in the Treasury letter of 15th March, 1876, makes it difficult to understand the basis of the calculations adopted in the letter now under reply, inasmuch as it is apparently proposed to call upon Ceylon to pay much less, and the Straits Settlements to pay much more than half what was then estimated as the total amount of loss on the mail service in respect of those two colonies (including the additional loss caused by their admission into the Postal Union).

4. Before, therefore, making any recommendations on the subject to the Colonial Governments, Lord Kimberley requests that he may be furnished with fuller statistics showing what is calculated as the total amount of loss on the mail service in respect of each colony, and whether the figures now given represent half that amount.

His Lordship would further be glad to receive a copy of any correspondence which has passed with the Post Office on the subject, and any other information which will assist him in forming an opinion on the subject.

5. Lord Kimberley also desires to know whether the sum of £13,771, which it is proposed to charge to Hongkong, is intended to refer to that colony only, as distinct from China and Japan generally.

I am, &c.,
R. G. W. HERBERT.

Enclosure No. 4.

The TREASURY to the COLONIAL OFFICE.

No. 13,565. Treasury Chambers, 30th July, 1880.

SIR,—I AM directed by the Lords Commissioners of Her Majesty's Treasury to transmit to you herewith, for the information of the Earl of Kimberley, with reference to your letter of the 26th ultimo in regard to the contribution which it is proposed should be paid by the colonies of Ceylon, Hongkong, and the Straits Settlements, respectively, towards the loss incurred by the Postal Service by which those colonies are served, copy of a report on the subject which my Lords have received from the Postmaster-General, dated the 26th instant.

I am, &c.,
WILLIAM LAW.

Sub-enclosure in Enclosure No. 4.

The GENERAL POST OFFICE to the TREASURY.

No. 76,613/79. General Post Office, 26th July, 1880.

MY LORDS,—WITH reference to your Lordships' further letter of the 2nd instant, No. 11,569, I have the honour to supply the further information desired by the Secretary of State for the Colonies in reference to the proposed call upon the colonies of Ceylon, Straits Settlements, and Hongkong for contributions towards the cost of the Packet Service to the East under the new contract with the Peninsular and Oriental Steam Navigation Company.

In the first place, I have to remark that the amounts which it is now proposed that these colonies shall contribute cannot properly be compared with the sums given in the Post Office Memorandum of the 14th of February, 1876, to which reference is made, because of the alterations that have taken place in the mail service under the present contract with the Peninsular and Oriental Company. The chief alterations are (1) a reduction in the amount of the subsidy from £430,000 to £360,000 a year; (2) the abolition of the Southampton and other lines of packets causing a decrease in the mileage to the extent of 438,516 miles annually; and (3) the despatch of the Australian mails *viâ* Brindisi and Galle every fortnight, instead of once in four weeks only.

The cost of the service is divided according to the mileage of each section and the amount of correspondence carried over it. The bulk of the Australian correspondence is not carried under the Imperial contract beyond Ceylon.

Also, it must be borne in mind that the rates of postage on which the estimate of February, 1876, was based were considerably reduced under the regulations of the Postal Convention of Paris, which came into force on 1st April, 1879, and that a further reduction in the rates was made on 1st of February last.

With regard to paragraphs 4 and 5 of the letter from the Colonial Office, I have to state that the figures given in my letter of the 2nd ultimo show one-half of the total loss on the mail service in respect of each colony; and that the sum of £13,771 with which it is proposed to charge Hongkong refers to that colony only, as distinct from China and Japan generally.

I have, &c.,
HENRY FAWCETT.

Enclosure No. 5.

The COLONIAL OFFICE to the GENERAL POST OFFICE.

Downing-street, 10th August, 1880.

SIR,—I AM directed by the Earl of Kimberley to request you to inform his Lordship what opportunities at present exist for sending ship letters to Ceylon, the Straits Settlements, and Hongkong independently of the regular mail service, and what is the charge for a ship letter in each case.

I am, &c.,
JOHN BRAMSTON.

Enclosure No. 6.

The GENERAL POST OFFICE to the COLONIAL OFFICE.

No. 121,213.

General Post Office,
London, 14th August, 1880.

SIR,—I AM directed by the Postmaster-General to acknowledge the receipt of your letter of the 10th instant, and in reply to acquaint you for the information of the Earl of Kimberley, that there are opportunities for sending ship mails to Ceylon, the Straits Settlements, and Hongkong once a week.

The mails for Ceylon are carried by vessels belonging to the British India Steam Ship Company and the "Ducal" line alternately.

The mails for the Straits Settlements and Hongkong are carried by vessels of the "Glen" line, "Castle" line, and the "Ocean Steam Ship Company."

In neither case do the steamers start on a fixed day of the week.

The postage for letters so sent to the places mentioned is fourpence per half ounce.

I am, &c.,
A. BENTHALL.

Enclosure No. 7.

The COLONIAL OFFICE to the TREASURY.

Downing-street, 28th August, 1880.

SIR,—I AM directed by the Earl of Kimberley to acknowledge the receipt of your letter of the 30th July, relating to the proposal to obtain contributions from the colonies of Ceylon, Hongkong, and the Straits Settlements towards the loss entailed upon the Imperial Treasury by the Postal Service.

2. Lord Kimberley is of opinion, as has been already stated, that the Governments of the Eastern colonies may properly be required to make some contribution towards the expenses of the service, but His Lordship does not feel able to call upon them to provide the large sums assigned to them respectively in the calculations made by the Postmaster-General, and which are specified in the Treasury letter of the 9th of June last.

3. It must be remembered that these colonies had no voice in the settlement of the contract, and though the service of the Peninsular and Oriental steamers is valuable to them in many ways, it can hardly be considered as necessary for the maintenance of postal communication.

4. The enclosed copy of a letter from the General Post Office shows that, in addition to the weekly French mail by the Messageries Maritimes, there are weekly opportunities of sending "ship letters" by the steamers selected for the purpose, and it is believed that there are other private steamers frequently sailing to and from the Eastern colonies.

5. Under these circumstances, Lord Kimberley is of opinion that if the wealthiest and most populous colony, viz., Ceylon, is called upon to contribute £2,700 per annum, the contribution to be asked for from Hongkong and the Straits Settlements should at least not exceed that amount.

I am, &c.,
R. H. MEADE.

Enclosure No. 8.

The TREASURY to the COLONIAL OFFICE.

No. 21,144/81. Treasury Chambers, 13th January, 1882.

SIR,—I AM directed by the Lords Commissioners of Her Majesty's Treasury to request that you will draw the attention of the Earl of Kimberley to the letters from this Department of 16th May, 1879, and 9th June, 1880, as to contributions from Hongkong, Straits Settlements, and Ceylon towards the India and China Mail Service.

The sums proposed were in round figures :—

	£	
Ceylon	1,400	Per Annum £20,100
Straits	6,000	
Hongkong ...	12,700	

but nothing seems yet to have been paid.

I am to inquire whether there is any prospect of contributions being paid during the coming year.

I have, &c.,
F. CAVENDISH.

Enclosure No. 9.

The COLONIAL OFFICE to the TREASURY.

Downing-street, 20th January, 1882.

SIR,—I AM directed by the Earl of Kimberley to acknowledge the receipt of your letter No. 21,144/81 of the 13th instant regarding the proposed contributions from Hongkong, the Straits Settlements, and Ceylon towards the India and China Mail Service.

2. In reply, I am to request you to inform the Lords Commissioners of the Treasury that no decision has been arrived at on this question in consequence of the letter to you from this Department of the 28th of August, 1880, having hitherto remained unanswered.

3. In that letter Lord Kimberley expressed the opinion that the contributions to be asked for from the Straits Settlements and from Hongkong should at least not exceed the amount asked from Ceylon, and His Lordship is awaiting a reply to that suggestion.

I am, &c.,
JOHN BRAMSTON.

Enclosure No. 10.

The TREASURY to the COLONIAL OFFICE.

No. 1,391. Treasury Chambers, 4th February, 1882.

SIR,—I AM directed by the Lords Commissioners of Her Majesty's Treasury to transmit to you herewith, for the information of the Earl of Kimberley, and with reference to the letter from this Board (No. 21,144) of the 13th ultimo, to which Mr. Bramston's letter of the 20th ultimo was a reply, and to previous correspondence, a copy of a report from the Postmaster-General dated the 20th October, 1880, respecting the principle adopted in apportioning to Ceylon, the Straits Settlements, and Hongkong a share of the loss on the Eastern Mail Service.

I am, &c.,
J. H. COLE.

Sub-enclosure in Enclosure No. 10.

The GENERAL POST OFFICE to the TREASURY.

No. 405 F. General Post Office, 20th October, 1880.

MY LORDS,—I HAVE the honour to acknowledge the receipt of your Lordships' letter of the 3rd of September, No. 15,579, enclosing a copy of a letter from the Colonial Office, dated the 28th of August, in reference to the proposed contributions from the colonies of Ceylon, Straits Settlements, and Hongkong towards the loss entailed upon the Imperial Exchequer by the Eastern Mail Service.

In that letter the Earl of Kimberley states that, while of opinion that these colonies may properly be called upon to make some contribution towards the cost of the mail service, he does not feel able to call upon them for such large sums as this Department assigns to them, and he adds that if Ceylon, which is the wealthiest of them, is only called upon to contribute £2,700 a year, the contributions demanded from Hongkong and the Straits Settlements should at least not exceed that amount.

In reply, I have to state that in apportioning to each colony its share of the loss on the Eastern Mail Service, the principal factors in the calculation were :—

(1) The comparative length of the services required ; and
(2) The comparative amount of correspondence forwarded in each case.

This principle is carried out by this Department in all similar assessments, and the following is a brief explanation of the method of making the necessary calculations.

The whole service performed by the Peninsular and Oriental, Company is divided into sections (*e.g.*, Brindisi and Alexandria, and Suez and Galle, &c.), and the annual subsidy is allotted to these sections in proportion to the annual mileage of each section. One-half of the amounts so arrived at is apportioned to the United Kingdom, whilst the other half is apportioned to the various countries and colonies using the sections in proportion to the number of letters forwarded on behalf of each.

As a matter of fact, the contributions proposed for Hongkong and the Straits Settlements are larger in amount than the contribution proposed for Ceylon, because the distances over which the mails are conveyed are greater in the case of the former colonies than in the case of the latter.

As regards Lord Kimberley's remark, in paragraph 3, that the colonies had no voice in the settlement of the contract with the Peninsular and Oriental Company, I have to point out that the Colonial Office, acting on behalf of the colonies, had a strong voice in the matter, and that it was in no small degree owing to the views of the Colonial Office as to the colonial interests that the present contract with the Peninsular and Oriental Company was preferred.

I have, &c.,
HENRY FAWCETT.

Enclosure No. 11.

The COLONIAL OFFICE to the TREASURY.

Downing-street, 23rd February, 1882.

SIR,—I AM directed by the Earl of Kimberley to acknowledge the receipt of your letter of the 4th instant, forwarding copy of a letter from the General Post Office, dated the 20th October, 1880, on the subject of the proposed contributions from the Eastern colonies to meet the deficiency of postage and consequent loss to the Exchequer arising from the conveyance of the mails under the present contract with the Peninsular and Oriental Company.

2. The Postmaster-General has observed in his letter that it was in no small degree owing to the views expressed by this Department that the present contract with the Peninsular and Oriental Company was preferred to the other tenders, but Lord Kimberley wishes it to be understood that the question of a money contribution by the Eastern colonies was not then before the Secretary of State, who was only invited to consider the relative merits of the respective tenderers in regard to the services to be performed by them, and that the Colonial Office, when it advised the Lords of the Treasury as to the present mail contract, had in view the requirements of the Australian rather than the Eastern colonies.

The latter colonies are so well supplied with steamship services as to be practically independent of any contract, and in the event of any future contract being entered into for the carriage of mails by steamers calling at Ceylon, the Straits Settlements, and Hongkong, these colonies may possibly not require to be included in it.

3. Lord Kimberley is, however, willing to invite the Governments of the three colonies in question to contribute each £2,500 per annum during the currency of the present contract.

I am, &c.,
ROBERT G. W. HERBERT.

Enclosure No. 12.

The TREASURY to the COLONIAL OFFICE.

No. 7,817. Treasury Chambers, 12th June, 1882.

SIR,—THE Lords Commissioners of Her Majesty's Treasury have had under their consideration your letter of the 23rd February last, on the subject of the proposed contributions from Ceylon, the Straits Settlements, and Hongkong towards the loss arising from the conveyance of mails.

It is stated in your letter that the financial view of the question was not considered by the Secretary of State when the present contract was made, but that the question was presented to him entirely with respect to the character of the service and the requirements of the Australian rather than of the Eastern colonies.

Lord Kimberley is, however, ready to recommend contributions from the three colonies in question of £2,500 per annum each,—in all £7,500.

I am directed to observe that in 1878 my Lords were informed by a letter from the Colonial Office, dated 8th August, that, in the opinion of the Secretary of State, the maintenance of a high speed in the Mediterranean was, especially at that time, of great importance, and that it was most desirable to maintain a direct separate service between Suez and Ceylon, the Straits and China, which could not be provided for except under the tender of the Peninsular and Oriental Company.

It is obvious that efficiency and a high rate of speed can only be obtained by a corresponding expenditure.

With respect to the amount of the contributions which my Lords ask from the colonies, it has been assumed that they should bear one-half of the loss incurred on the sections of the packet service in which they are interested, and according to that assessment the contributions should be, as previously pointed out, Ceylon, £1,400; Straits Settlements, £6,000; Hongkong, £12,700.

Their Lordships fear that in the previous letters which have passed on the subject the facts and calculations have not been put before the Secretary of State in a sufficiently clear and definite form.

They have therefore caused to be prepared by the Postmaster-General's Department a memorandum and statement, in figures, showing precisely how the loss on this service should be divided, a copy of which is herewith transmitted.

You will observe that the calculation is based upon the service rendered—*i.e.*, the number of letters and the distance over which they are carried—and my Lords are unable to see that any fairer basis of agreement can be arrived at.

Lord Kimberley's proposal to ask an equal payment from each colony would, besides any other objection, present the anomaly of calling upon Ceylon to pay more than her fair share.

It is further to be borne in mind that the colonies would obtain a considerable set off, if they agree to the proposal of my Lords, by the relief which it is intended to afford them from the obligation they now incur of paying half the additional annual loss of postage sustained by the Imperial revenue since the colonies joined the Postal Union, and thereby obtained a considerable reduction in their postage rates.

For the ten months ending 31st January, 1880, the sums chargeable to the three colonies for half the additional loss are as follows:—Ceylon, £2,698; Straits Settlements, £3,459; Hongkong, £2,828; total, £8,985, or at the rate of £10,782 for a year.

To this extent the colonies would be relieved from 12th February, 1880, on entering upon the new arrangement which would take effect from that date.

My Lords trust that Lord Kimberley will, with this further explanation before him, reconsider the terms which he is ready to propose to the colonies, and endeavour to obtain from them payment of the amounts which, as their Lordships are convinced, are fairly due from them.

I have, &c.,
LEONARD COURTNAY.

Sub-enclosure in Enclosure No. 12.

Memorandum.

A statement is enclosed giving the particulars of the Post Office calculation.

On reference to this statement it will be seen that the mode of apportioning the loss on the Eastern Mail Service follows somewhat the formula adopted by Mr. Courtnay.

Division of Cost.—The whole distance from Brindisi to Shanghai is divided into sections, and the gross subsidy paid to the Peninsular and Oriental Company (£360,000) is apportioned amongst these sections according to the *annual* mileage of each. One-half of the cost of all the sections, amounting to £180,000, is assessed to the United Kingdom, the other half being charged, rateably, against India and the various countries or colonies making use of such sections in proportion to the number of letters conveyed on behalf of each.

Division of Sea Postage.—The earnings are treated in the following manner. The whole sea postage collected by the colonies is remitted, in the first instance, to the Imperial Post Office, where it is added to the sea postage collected by the United Kingdom for the purposes of apportionment. It is then divided into two categories, viz., (*a*) sea postage derived from mails exchanged by the colonies with the United Kingdom, and (*b*) sea postage accruing from intermediate mails and from mails conveyed on behalf of foreign countries. The former description of sea postage is allotted, half to the United Kingdom and half to the colony with which the mails are exchanged, whilst the latter is shared in the same proportions as the cost of the section or sections over which the mails may be carried.

Apportionment of Loss.—The share of the loss apportioned to each colony is found by deducting the colonial share of the earnings from the colonial share of the cost.

General Post Office,
London, 22nd May, 1882.

GEO. CHETWYND,
Receiver and Accountant-General.

STATEMENT showing, as regards Ceylon, Straits Settlements, and Hongkong (1) the division of cost of the Eastern Mail Service, (2) the division of the Receipts for Sea Postage, and (3) the apportionment of the loss on the Service.

I.—*Division of Cost.*

Sectional Lines into which the Service is divided.	Annual mileage of each section.	Apportionment of subsidy amongst the sections according to the mileage.	Moiety of cost assessed to the United Kingdom.	Moiety of cost assessed to other places in proportion to number of letters conveyed on behalf of each. Share falling to				Total.
				Ceylon.	Straits Settlements.	Hongkong.	India and other places.	
		£	£	£	£	£	£	£
Mediterranean ...	85,800	39,767	19,883	355	293	341	18,895	19,884
Suez and Bombay ...	309,088	143,258	71,629	—	—	—	71,629	71,629
Suez and Galle ...	178,984	82,956	41,478	2,217	1,909	2,146	35,206	41,478
Galle and Singapore ...	82,888	38,417	19,209	83	3,958	3,979	11,188	19,208
Singapore and Hongkong ...	74,724	34,634	17,317	43	605	7,066	9,603	17,317
Hongkong and Shanghai ..	45,240	20,968	10,484	23	306	239	9,916	10,484
Total ...	776,724	360,000	180,000	2,721	7,071	13,771	156,437	180,000

II.—*Division of Sea Postage.*

Colony.	Total Sea Postage accruing from the correspondence of the Colony.	Colonial share, one-half.
	£	£
Ceylon ...	2,642	1,321
Straits Settlements ...	2,142	1,071
Hongkong ...	2,142	1,071

III.—*Apportionment of Loss.*

Colony.	Colonial share of the cost.	Colonial share of the Sea Postage.	Difference, being amount of loss apportioned to each Colony.
	£	£	£
Ceylon ..	2,721	1,321	1,400
Straits Settlements ..	7,071	1,071	6,000
Hongkong ...	13,771	1,071	12,700

Enclosure No. 13.

The Colonial Office to the Treasury.

Downing-street, 7th December, 1882.

Sir,—I am directed by the Earl of Kimberley to acknowledge the receipt of your letter of the 12th of June last, respecting the annual payments which, in their Lordships' opinion, ought to be made by the three Eastern colonies of Ceylon, Hongkong, and the Straits Settlements, respectively, in reduction of the loss on the conveyance of mails.

2. Their Lordships observe, with regard to the letter from this Department of the 23rd of February: "It is stated in your letter that the financial view of the question was not considered by the Secretary of State when the present contract was made." And it is further observed that efficiency and a high rate of speed can only be obtained by a corresponding expenditure.

I am to point out that the words quoted above do not accurately represent the state of the case as explained in the Colonial Office letter of the 23rd of February.

That letter stated that when the present contract was being considered "the question of a money contribution by the Eastern colonies was not before the Secretary of State," and I am to observe that when their Lordships submitted the alternative tenders for the new contract to the Secretary of State in a "very pressing" letter of the 3rd of August, 1878, they gave him no intimation that contributions would be expected from the Eastern colonies.

3. Lord Kimberley is ready to admit that in principle these colonies may fairly be asked to bear a share of the cost of a mail service, provided that such share be reasonable and proportioned to the benefit derived by the colonists generally; but His Lordship feels himself obliged to point out that each of the Eastern colonies is almost entirely inhabited and its revenue contributed by a native population making little or no use of the mail service, and that so far as its value for purposes of correspondence is concerned this population would have no objection to dispense with it altogether. It would therefore hardly seem reasonable to ask communities so constituted to pay the large subsidies in question,—amounting in Hongkong to 5 per cent. on the whole public revenue of the colony.

On the other hand, His Lordship considers that the importance to the mother country of regular mail communication with the East is not to be measured only by the number of letters conveyed. Besides the assistance which it affords to Her Majesty's Government in facilitating the administration of these Dependencies and the direction of the Naval Forces in the East, it may fairly be said that the mercantile community of the United Kingdom who supply the capital for and control the operations of the commerce of these colonies have a greater interest in the correspondence than their colonial correspondents, and should bear more than half the expense.

4. In the case of Ceylon and the Straits Settlements the sums are comparatively small, and Lord Kimberley, notwithstanding the reasons which might be urged, as has been stated above, will invite the Colonial Governments to make total contributions of £1,400 and £6,000 respectively.

In the case of Hongkong, however, a much more considerable sum is involved; and considering that the colony was not consulted, at the time when the contract was made, as to contributing to the subsidy, and that there are numerous steamships to and from the colony which, as far as the interests of the colonial community are concerned, render a subsidy unnecessary, His Lordship cannot undertake to press the Colonial Government to provide a contribution. His Lordship is, nevertheless, prepared to direct the Governor to propose to the Legislative Council an annual contribution not exceeding £6,000.

I am, &c.,

R. G. W. HERBERT.

Enclosure No. 14.

The TREASURY to the COLONIAL OFFICE.

No. 19,939. Treasury Chambers, 28th December, 1882.

SIR,—I AM directed by the Lords Commissioners of Her Majesty's Treasury to acknowledge the receipt of your letter of the 7th instant respecting the contributions to be made by Ceylon, Hongkong, and the Straits Settlements towards meeting the loss on the Eastern Mail Contract.

My Lords observe that the Secretary of State does not appear to contest the justice of the contributions my Lords have required from the Eastern colonies, and that he proposes to ask the contributions of £1,400 and £6,000 from Ceylon and the Straits Settlements, respectively, which are in fact the assessments claimed in the letter from this Board of the 12th June last. With respect to the claim on Hongkong, which was stated in the same letter as £12,700, Lord Kimberley proposed to ask the colony for £6,000, but my Lords would represent that the gain derived by this colony from the relief of half the additional loss due to its having joined the Postal Union, estimated at £3,300 or more annually, appears to have been overlooked, or at least insufficiently considered. My Lords think that upon reconsideration it will be seen that the application to Hongkong should at least be increased from £6,000 by this sum of £3,300, of which the colony has gained the benefit.

I have, &c.,

R. R. W. LINGEN.

XLIII.—1882.

FOREST ADMINISTRATION OF CEYLON.

REPORT

ON

THE CONSERVATION AND ADMINISTRATION

OF

THE CROWN FORESTS IN CEYLON.

By F. D'A. VINCENT, Esq.,
(of the Indian Forest Service.)

Ordered by His Excellency the Governor to be Printed.

Colombo:
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1883.

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REPORT

ON

THE FOREST ADMINISTRATION OF CEYLON.

PART I.

GENERAL DESCRIPTION AND PAST FOREST MANAGEMENT.

CHAPTER I.

GENERAL—SOIL—CLIMATE, &c.

1. *Geographical Position.*—THE Island of Ceylon, at the southern end of the Indian Peninsula between the Indian Ocean and the Bay of Bengal, lies between the parallels of north latitude 5° 53′ and 9° 51′; in longitude 79° 42′ and 81° 55′, east of Greenwich.

2. *Shape of the Island.*—In shape it resembles a pear, with the small end only separated from India by a channel about 40 miles wide. This channel is almost bridged across by the Island of Mannár, 140 miles north of Colombo, and a series of coral reefs forming Adam's Bridge, across which Rama passed when he came to avenge the carrying off of Sita by Rávana. The only passage through this causeway of coral reefs is the Paumben channel, with 12 to 14 feet of water. The stalk of the pear is formed by the Jaffna peninsula, a narrow strip of land, which is one of the most populous and best cultivated parts of the Island.

3. *Size of the Island.*—The greatest length of the Island from Jaffna to Dondra Head is 267 miles, and its greatest breadth 140 miles. The area of the Island is 24,702 square miles, or 15,809,280 acres. Compared with the different Indian Provinces, Ceylon is equal to about one-third of the North-West Provinces, and one-fourth of the Punjab. The area of the Island of Mauritius, where the forests have been recently reported on by Mr. Thompson, an officer of the Indian Forest Service, is only 705 square miles.

4. *Administrative Divisions.*—For administrative purposes, the Island is divided into seven Provinces, viz.:—

		Square Miles.			Square Miles.
The Western	...	3,345	The Eastern	...	3,510
„ Central	...	5,770	„ North-Central	...	3,971
„ North-Western	...	3,029	„ Northern	...	3,150
„ Southern	...	1,927			

Each Province is divided into districts, with sub-divisions called kóralés or pattus.

5. *Provincial Administration.*—A Government Agent is at the head of the provincial administration. He administers the central district of the Province, helped by an Office Assistant, and in addition supervises the work of the outlying districts in charge of Assistant Government Agents. The Revenue authorities have no judicial work, and exceptionally only judicial powers.

6. *Subordinate Revenue Officials.*—Under the Government Agents and their Assistants are Mudaliyárs or Raṭémahatmayás in charge of kóralés. These men are similar to the Indian Tahsildar, except that they have no judicial powers. They are paid by Government, but the other village headmen, such as Kórála, Vidáné, A'rachchi, or the Police Officer (Chowkedar), receive usually no remuneration. The land they hold pays no grain tax during their tenure of office, but they receive no perquisites or allowances from Government or the village beyond 5 per cent. on the revenue or taxes which they collect.

7. *Justice.*—Justice is administered by Police Courts, Courts of Requests, District Courts, and the Supreme Court. The powers of the first are very limited, and are confined to cases not punishable with more than £5 fine and three months' imprisonment. All criminal convictions are appealable to the Supreme Court.

8. *Population.*—The population of Ceylon, according to the Census taken in 1881, was 2,759,738, the distribution of the inhabitants ranging from 260 to the square mile in the Western Province to 16 in the North-Central Province. For the whole Island the density is 109 to the square mile. The population is most unequally divided, and the areas of the provincial divisions convey little idea of its distribution. The Jaffna District, only one-fourth of the Northern Province, in area, contains more than five-sixths of the total provincial population. In the Eastern Province, again, there are enormous tracts of country populated only by a few migratory Veddahs, whilst the greater part of the population is found within two miles of the seaboard.

9. *Races.*—The different races contribute to the population in the following proportions:—

				Ratio per 10,000.
Siṇhalese	...	1,840,000	...	6,691
Tamils	...	689,000	...	2,490
Moormen	...	195,000	...	669
Malays, Afghans, Veddahs, Roḍiyas, &c.	...	13,000	...	67
European descendants	...	15,000	...	65
Europeans	...	6,000	...	18

10. *Occupation and distribution of the different Races.*—The majority of the Siphalese are in the Southern, Central, and Western Provinces. Speaking generally, it may be said that they inhabit the moist and the hill zones. They are chiefly employed in agriculture and in fisheries along the seaboard. Of the Tamil population, about 256,000 are Indian immigrants or their descendants; of these, over 190,000 are labourers finding employment on coffee, tea, or cinchona estates, on roads, &c., or in other manual or domestic labour. The resident Tamil population is chiefly to be found in the Eastern and Northern Provinces, where there are few Siphalese. Here 67 per cent. of the population is Tamil, and 18 per cent. Mahommedan.* The gradual spread of the Tamils down the coasts, especially the Eastern, and the fact that nowhere except in the Northern Province and in Tamankaduwa, do they form more than coast settlements, are both striking. Wherever the Tamil or the Mahommedan comes to settle, the Siphalese is driven back to the forest, where he earns a precarious existence by chena cultivation and by hunting.

The Moors or Mahommedans, a most enterprising class, do most of the trade of the country. They take the place of the Indian "baniah," and, except under the new irrigation tanks of the Eastern Province and in Tamankaduwa, never cultivate paddy to any large extent. Another interesting class consists of the so-called Afghans—generally Beluchis—who, coming orginally as horse-dealers from Hyderabad in the Deccan, now make a living by lending money to Tamil estate coolies, in which business they have a monopoly.

11. *Area of Cultivation.*—The total area under cultivation is estimated at 2½ million acres, or rather less than one-sixth of the total area of the Island. The only permanent grain crop is paddy; kurakkan (rági), maize, gingelly, and other "dry grains" are only grown in chena or "jhum" clearings or in gardens.

12. *Land Tax on Paddy Cultivation.*—To grasp the forest question properly I should add a few words regarding the Land Tax. On paddy cultivation the Crown claims one-tenth† of the produce. Up to 1878 the Crown share of the produce, or "Paddy Rent," was sold by auction twice a year to "renters." To do away with this farming of the revenue, the Grain Tax Ordinance of 1878 was passed, under which a sort of "raiyatwari" settlement, subject to a revision every seven years, is being made throughout the Island.

13. *Dry Grain, or Chena Crops.*—The "dry grain"‡ or chena revenue is much more complicated. The crops cultivated in chenas or in gardens are:—(1) kurakkan, maize, gingelly, kollu, amu, and hill-paddy, which are classed as "dry grains;" and (2) tobacco, plantains, chillies, pumpkins, manioka (cassava), &c.

14. *Dry Grain, or Chena Tax.*—The dry grains only are taxable. In some parts of the Island, such as the old Kandyan country, dry grain grown on *private* chena land or in gardens is free of tax. Elsewhere, one-fifth to one-fourth of the crop is taken as the Crown share. The tax from chenas grown on *Crown land* varies from one-fifth to one-fourth of the crop when the clearing is made with permission. When unlicensed, the tax is doubled. In the North-Central Province, and in parts of the Central Province, chenas on Crown land are free.

15. *Dry Grain Rents.*—The dry grain rents were formerly sold to "renters," and the complications that arose with garden cultivation in the Jaffna Peninsula were considerable, when in a small field there are generally six or eight different crops growing, of which only two perhaps are taxable. The confusion was added to by the rents being sold quarterly. The dry grain tax will, under the Grain Tax Ordinance, be paid in future in money, the value of each crop sown being assessed by the local native headmen.

16. *Crown demand on Dry Grain Crop compared with that on Paddy.*—The tax imposed by the Crown on dry-grain cultivation appears, at first sight, much higher than it is in the case of paddy. This is more apparent than real. In paddy cultivation, the return is rarely over fifteen-fold; seldom so much: the cultivation is expensive and laborious. With dry-grain it is quite the reverse; it involves the minimum of labour for, at the lowest estimate, a forty or sixty-fold return; so that, taken in connection with other circumstances, the incidence of the tax is lighter. In considering the chena question, the fact of this large return from the land with the smallest possible expenditure of labour should be borne in mind. The attraction which such a form of cultivation must have for an indolent population is naturally very great.

17. *Absence of Tax on other Cultivation.*—There is no other land tax, so that we have the anomaly of the principal food grains of the people being heavily taxed with a Government demand of 10 to 25 per cent., whilst all the land cultivated with tobacco, plantains, or so-called garden produce, also that covered with coffee, tea, cinchona, and likewise the large areas planted with cocoanuts, cinnamon, and citronella grass, belonging chiefly to natives, being held free of all taxes. We shall also see further on that paddy, the best food for the people, is taxed more heavily than the "dry grains," which are said to be very heating and unwholesome.§ The only other direct tax is a poll-tax of Rs. 1½ to Rs. 2 a head, paid annually by all males towards the construction of roads.

18. *European Enterprise.*—European enterprise has employed itself almost entirely with coffee, cinchona, tea, cocoa, Liberian coffee, and in a small way with cocoanut estates. Cinchona, tea, cocoa, and Liberian coffee are known as new products, in contra-distinction to coffee, which is the old staple Ceylon product.

19. *Coffee Cultivation.*—Coffee grows best at elevations between 2,000 feet and 5,000 feet, with a rainfall of over 80 inches. Owing to the ravages of *Hemileia vastatrix*, a fungus causing

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* Tamil per 100.—Northern Province, 95; Eastern Province, 59. Mahommedan per 100.—Northern Province, 3; Eastern Province, 34.

† Subject to certain local exemptions.

‡ *I. e.*, unirrigated

§ Ceylon has to import rice and paddy: over 7 million bushels were imported in 1881. Taking the Blue Book figures, showing 550,000 acres under paddy, with a yield of (say) 20 bushels an acre, the Island's production in 1881 was 11 million bushels.

the malady known as the leaf disease, the exports of coffee have decreased from 824,509 cwts.* in 1878–79, to 564,000 cwts. in 1881–82. Ceylon coffee still fetches the highest price in the London market, but a serious fall in the market price from 100*s.* per cwt. to 70*s.*, adds still further to the difficulties of the situation. Liberian coffee is largely cultivated in the low hilly country between the western coast and the mountain ranges, but the exports, which have not yet assumed any large dimensions, are included with Arabian coffee in the figures given above.

20. *Cinchona, Tea and Cocoa.*—Cinchona grows at the same elevation as coffee, and up as high as 6,000 feet. The exports are as yet comparatively small, but in a few years, when all the trees planted out in the old coffee estates have grown up, the annual production will become very large. Already Ceylon exports one-fifth of the total amount of cinchona bark imported into Great Britain. Tea and cocoa also promise to play an important part in the future trade of Ceylon.

The exports of these three products have increased very largely in the last few years, as the following figures will show:—

Exports.

		1879.		1882.
Cinchona	... ...	lbs. 1,200,000	...	lbs 3,099,000
Tea	... ...	„ 103,000	...	„ 623,000
Cocoa	... ...	cwts. 122	...	cwts. 1,018

The other principal exports of Ceylon are cinnamon, cocoanut oil and coir, citronella oil, &c.

21. *Revenue and Expenditure.*—The revenue for 1881 amounted to Rs. 13,686,491, and the expenditure to Rs. 13,533,259. The main branches of the revenue are import duties on rice and on cotton goods, sales of Crown lands, land revenue from paddy, dry grains, &c., salt and timber sales, excise duty and stamps, railways, and pearl fisheries.

22. *Communications—Roads.*—Throughout the coffee districts and in the more thickly-populated parts along the western and southern coasts, Ceylon is provided with very fine metalled or gravelled roads, the Island comparing very favourably with India in this respect; those made throughout the coffee districts especially being well laid out, and always in perfect order, notwithstanding great difficulties of country and climate. For the carting of timber, the greater part of the dry zone is sufficiently level, without making the construction of roads necessary. The carts and bullocks are very good. Logs weighing 20 cwts. are taken without any difficulty, and carriage is generally cheap and abundant.

23. *Canal and River Transport.*—For 90 miles along the western coast there is canal communication, and in many other places round the coast the estuaries and lagoons form navigable waterways. Some of the rivers are navigable for 50 miles from the sea, but generally only for canoes and other boats of light draught.

24. *Railways.*—A railway has been open since 1867 to Kandy, the ascent of the ghat, representing a rise of 1,800 feet in 12 miles, having caused great difficulties. The length of this line is 72 miles. There are extensions of 17 miles each to Mátalé and Náwalapitiya, and a further extension of 41 miles on the broad guage from the latter place to Nánu-oya is now being constructed. The elevation of Náwalapitiya is 1,913 feet, and in 41 miles the new line will ascend 3,379 feet to an elevation of 5,292 feet, the prevailing gradient being 1 in 44. From Colombo, a railway runs for 29 miles along the western coast to Kalutara.

TOPOGRAPHICAL FEATURES.

25. *Central Tableland.*—The principal feature of the island is a high central tableland, equidistant from the eastern and western coasts. Rising suddenly from the low-lying country to the north, east, and south, and from the low hills along the western coast to a height of over 6,000 feet, it forms a very remarkable feature when approaching the Island by sea, from which Adam's Peak, over 7,000 feet elevation, is only 42 miles in a direct line. This tableland is enclosed by a range of lofty hills, rising very suddenly from the plains or low country, to an average elevation of 3,000 to 4,000 feet. The range runs southwards in a more or less unbroken line from Ambokka and Ṭapola, north of Mátalé, to Kadugannáwa, at the top of the railway ghat leading to Kandy, and on to Yakdessa and Adam's Peak. At the latter place it takes a turn, and goes east and north-east to Kirigalpotta, the Horton Plains, Haputalé and Namunakuli; here it turns north to Madulsíma and Kohanékanda. Forming three sides of a square of about 50 miles, it encloses the central plateau on all sides except to the north, where, through the scattered hills of Mátalé, Hunnasgiriya and the Knuckles, the Mahaviliganga, draining nearly the whole of the plateau, finds an outlet. The peaks rise to an extreme height of 7,352 feet at Adam's Peak, and 6,664 feet at Namunakuli, forming the south-west and east corners of the range.

26. *Character of country surrounding the Plateau.*—Between the latter and the seaboard to the west and south-west, the country is hilly and undulating. There are a few outlying spurs, off-shoots of the main ranges, such as the Morawak kóralé and the Haycock, rising to an height of about 2,000 feet. Except quite close to the sea, the general character of the country consists of broad deep valleys, separated by steep and rocky, though forest-covered, ridges. This hilly country coincides with the damper portions of the Island. To the south, east, and north of the central mountain system, the country, from the foot of the hills down to the seashore, consists of level forest-covered plains slightly raised above sea level, the only natural features to vary the monotonous scenery being a few rocky gneiss hills.

27. *Central dividing range.*—In the centre of the plateau dividing it into two halves we have the highest range of the Island, with several large side spurs, running north-north-west for nearly 40 miles from the Horton Plains to the vicinity of Kandy. The average height of this

* These and the following figures are taken from the Chamber of Commerce Return of October, 1882.

range is about 6,000 feet, the highest points—Pedro and Kirigalpotta—having respectively an elevation of 8,296 and 7,831 feet.

28. *Western Slopes.*—To the western side of this dividing range we have what was originally all forest-covered country extending down to the edge of the low country and onwards to the sea. The country is hilly and irregular; the temperature is high and equable; the rainfall heavy and frequent, and the air always heavily charged with moisture. The vegetation is characteristic and tropical, very similar to that of the west coast of Travancore and to other tropical islands, but it is here that the most of the species peculiar to Ceylon are found. Of the forest, large areas have been cleared for coffee and for chena cultivation.

29. *Eastern Slopes.*—To the eastern side of the main range we have a drier country extending for 80 miles down to the Bay of Bengal. On the plateau, for about 25 miles in the Badulla and Passara direction, there are grassy downs or patanas. The ridges are covered with grass, with patches of forest in the hollows and on cool protected slopes. The tree vegetation has less of a tropical character, and the growth shows less vigour. On the western side of the plateau the hills are very steep and the valleys deep; here the difference in elevation, between the tops of the hills and the valleys, is much less—we have long flat ridges and shallower valleys, and the country has a more undulating character. The eastern side of the plateau is protected by the main range from the summer monsoon rains, and resembling the corresponding slopes of the Nilgiris, consists of very similar grassy downs, with "sholas" in the valleys and in protected situations only.

The western and eastern hill slopes and the country between the hills and the western coast comprise the MOIST ZONE.

30. *Low dry country to the North, East and South.*—Once off the plateau and in the so-called low country, the patanas disappear, and—occupying about three-fourths of the entire Island—we have a level country, nowhere much raised above sea level, with a moderate rainfall and a well-defined period of hot dry weather, which is covered down to the seashore with a peculiar and most characteristic class of forest. The only natural features of any interest are the large isolated hills, apparently outliers of the main mountain system, consisting of enormous masses of gneiss rock. The largest of these are Friar's Hood, 2,134 feet; Gunner's Quoin, 1,766 feet; False Hood, 2,394 feet; and Westminster Abbey, well-known landmarks for ships passing along the eastern coast. There is little variety except that the further north we go, leaving the main hill ranges behind, the rarer become these clusters of rocky hills, and the greater the similarity, both in physical characters and in vegetation, to the opposite Indian coast. North of Vilánkulam, for 60 miles up to Elephant Pass, there is an unbroken stretch of level forest-covered plains from sea to sea. The rainfall rarely exceeds 40 inches, and, instead of luxuriant tropical growth, we have forest of rather a stunted character. The trees, slow-growing and small, both in girth and height, often deserve the name of scrub instead of forest; they struggle on, nourished more by the humid atmosphere and the frequent rainfall than by the poor sandy soil.

This part of the Island is elsewhere spoken of as the DRY ZONE.

31. *Principal Rivers—Drainage of the Mountain Plateau.*—The principal rivers and all those with a permanent flow of water take their rise from the central hill ranges. The Mahawéliganga, the largest Ceylon river, drains both sides of the central plateau, the drainage of the western slopes being carried by it past Kandy, to unite where it leaves the hill country with the Badulla or Uva branch. It runs through the important forest country of Bintenna and Tamankaduwa, into the sea near Trincomalee on the eastern coast.

32. *Other Rivers.*—With the exception of the Kelani-ganga, which rises on the north side of Adam's Peak, all the other rivers rise on the outer slopes of the range flanking the central plateau. The most important streams are the Deduru-oya, Maha-oya, Kalu-ganga, Gindura, Nilwalá-oya, Walawé-ganga. Except for more than 20 miles from the sea, these are generally suitable for floating purposes in flood time only. Within that distance the Kelani and the Kalu-gangas, whose *embouchures* are at Colombo and Kalutara, and the Gindura, in the Southern Province, form fine navigable streams, on which large quantities of the lighter kinds of timber and of firewood are brought down in rafts and boats by native traders. Few of the rivers draining the drier country, even though they have their sources in the central mountains, have any permanent flow of water; of many, the beds are quite dry for nine months in the year, and the chance of floods, high enough for floating purposes, is somewhat uncertain at all times.

PHYSICAL FEATURES.

33. *Geology.*—A few words will describe the geology sufficiently for the purposes of this report.

General Description.—The greater part of the Island consists of sedimentary beds of great but uncertain age, without any fossil remains. The mountain ranges and the remarkable monolithic rocks which rise suddenly out of the low country to a height of several hundred feet in the northern and eastern parts of the Island, consist of gneiss, sometimes hard and weathering very little, but often with an excess of felspar, and under the influence of water decomposing rapidly. It is evident, though, that part of the Island must have been recently submerged, from the thick layers of shells which are to be found 10 feet above the level of the sea at Hambantota and other places along the southern coast. Observations in the last 60 years show conclusively that the land is gradually rising, more especially along the western side of the Island.

34. *Formation of the Hill Ranges.*—The position and elevation of the hill ranges show that, like the Western and Eastern Ghats, they are the result of successive upheavals, the prominent peaks and ridges having probably been the result of the most recent action. In some parts

of the Central Province, such as Badulla, Nálanda, Maskeliya, there is an outcrop of beds of dolomite, yielding very fine building lime, but generally too remote to be of much value. Nearly all the lime used is burnt from coral collected on the sea-coast.

35. *Cretaceous Beds—Jaffna.*—In the Jaffna Peninsula we have secondary limestone beds very similar to those of Trichinopoly and Pondicherry on the opposite Indian coast. The fact that with careful cultivation the Jaffna soil is one of the most fertile is due, probably, to the presence of lime.

36. *Laterite or Kabook—Plumbago—Gems.*—Over the gneiss rock we have in the Colombo district and elsewhere, laterite or kabook which is a soft semipetrified red clay, a result of the disintegration of gneiss. It is largely used for building and for dressing the roads. In the former case it is quarried, when soft, into square blocks, similar to coral building blocks, and allowed to harden by exposure to the air. Greenstone underlies the gneiss at Trincomalee. Plumbago is found in several parts of the Island, and is now exported largely. The best gems, for which Ceylon is so celebrated, are found in the gravel beds of the Sabaragamuwa country under Adam's Peak. Chrysoberyls (or cat's-eyes) are the most valuable: good sapphires and rubies are very rare.

37. *Soil generally inferior—Gravel beds.*—As far as richness and fertility go, the soil of Ceylon may be said to be most inferior. The surface soil consists generally of sand, or a red sandy or gravelly loam, sometimes passing off into a red clay of varying depth overlying deep gravel beds. Often the gravel is quite close to the surface, and although the beds are not too compact to admit of the roots penetrating, so little nourishment is to be found except in the surface soil that all trees throw out large lateral roots.

38. *Soil better in the hills and the damper portions of the Island.*—In the hill country, and between it and the western coast, the soil is certainly better than elsewhere, the sub-soil being deeper; there is less gravel, and the clay resulting from the decomposition of the gneiss, although rather heavy, is by no means a bad soil if properly treated. This fact and the heavier rainfall account for the superior character of the forest growth, as compared with that in the drier parts of the Island.

39. *Marked absence of humus.*—In all the forests of the dry zone there is a remarkable absence of humus, and it is only in the damper parts of the Island and in the hill forests that we find any large deposits of leaf mould. This is the more curious when it is remembered that the forests are all evergreen, and that the surface soil is never much exposed to the sun and the wind. The dead leaves appear to decompose in a few months, and the resulting humus is at once absorbed by the roots of the trees and of the undergrowth. There is, therefore, no proper bed for the germination of the seeds, and very little reserve of nourishment for the tender young seedlings. This may in some way account for the poor reproduction of the slower-growing and more tender species. In the damp forests on the western sides of the Island and along the Kelani-ganga, the Gindura, &c., and in the hill country, the soil, although naturally poor, has, when covered with forest, been gradually improved by the annual fall of leaves, and sometimes we find a good rich surface soil of some depth.

METEOROLOGY.

40. *Climate—General.*—The climate of Ceylon is most equable, especially along the western coast, where the daily mean temperature varies little all the year round.

41. *Annual mean Temperature.*—The annual mean temperature for the whole of the low country is much the same, the greatest difference being 2° to 3° between Galle and Jaffna, at the southern and northern extremities of the Island. The rainfall and annual mean temperature of those places are respectively: Galle, 90 inches, 79·9°; Jaffna, 42 inches, 82·2°. There is, however, considerable difference in the daily and monthly mean temperature in different parts of the Island. Where the low country is affected by the south-west monsoon rains the daily range of the thermometer is never greater than 12 degrees, the air is always saturated with moisture, and there is no real cold weather. The coolest time of the year is from May to October, as during those months the showers are frequent and the sea breeze is steady. The hottest months are February, March, and April.

42. *Temperature in the drier parts of the Island.*—In the drier parts of the Island the daily range of the thermometer is large, being as much as 20° in some places. From October to March is the coolest time of the year, but as soon as the monsoon changes and south-westerly currents begin the country dries up and the weather gets hot. The south-west monsoon makes itself felt in the dry zone, comprising three-fourths of the Island, as a hot land-wind, parching the grass and the leaves.

43. *South-west Monsoon on the Eastern side of the Island.*—In the Eastern Province it comes direct from the central ranges of hills, and having been there relieved of much of its moisture, gets well heated in passing over 100 miles of dry country before reaching Batticaloa or Trincomalee. In the Hambantota District and from Puttalam northwards, as indeed throughout the dry zone, although coming direct from the sea and laden with moisture, it brings no rain; all the tanks on which the people depend for drinking water dry up, and forest work becomes very difficult in many parts of the country from July up to the burst of the north-east monsoon in October.

44. *Effect of the high south-west wind on the vegetation.*—It is probably in great measure due to this hot wind blowing for six months in the year that the growth of the forest in the dry zone is so stunted and poor. A rainfall of over 40 inches in an atmosphere so equable and so nearly saturated with moisture is sufficient for good forest growth if a gale of wind did not blow continually for six months and dry up the soil.

45. *Influence of rainfall on the Vegetation.*—The influence of the rainfall and its distribution on the vegetation is more remarkable in Ceylon than, perhaps, anywhere else, for probably in

no other part of the world are the limits of a moist zone, of heavy and light rainfall, so sharply defined by the natural tree vegetation In parts of Bombay and Madras we may find locally some partiality in the rainfall as in Ceylon, but nowhere is the south-west monsoon so localized in its influence, and so regular in the area of its distribution, year after year.

46. *No general description of Meteorology.*—There is, as far as I am aware, no account published of the meteorological phenomena of Ceylon, and the science has scarcely received the same attention paid to it in other countries. Rainfall records are published by the Surveyor-General and the Public Works Department. The former has arranged fourteen observing stations in different parts of the Island, where full observations have been taken for the last 10 to 12 years by paid observers. In addition to this, 50 rain gauges have been placed in different parts of the planting districts, where rainfall records are kept up. Only the rainfall returns have as yet been published, although I understand the full results of ten years' observations will soon appear in print.

47. *Public Works Department Rainfall Returns.*—The Public Works Department return comprises 62 stations in different parts of the Island, where records are kept by overseers and tank guardians. Between this return and that mentioned above there are very great discrepancies, and as, from the position of many of the Public Works Department rain gauges, there is every reason for questioning the accuracy of the figures published, I shall only notice those published by the Surveyor-General.

48. *South-west Monsoon.*—Ceylon lies directly in the path of the south-west and north-east monsoon currents, and almost all the rain-clouds which empty themselves on the Island come from these directions. The only exceptions are a few thunder-clouds which hang about the Island during the short period of still weather—between the close of one monsoon and the commencement of the reverse current. The south-west monsoon commences about the beginning of April, increasing in force till it reaches its height, about the middle of May. From the beginning of the month the S. W. currents daily increase in regularity and force, but usually not till the end of the month is there any steady wind from that direction on the sea-coast, although in the hills the change of season makes itself felt much earlier. It is then said to burst when a succession of heavy squalls of wind and rain comes up from the sea-ward, but the average rainfall of the month of May is not much heavier than in the preceding or following months. In the hills the monsoon downpour begins much earlier than at sea level, but the burst of the monsoon is by no means so marked a phenomenon as on the west coast of India. From a series of dates for 28 years compiled in the Ceylon Directory, it appears that the small monsoon generally breaks in the latter half of April, followed four weeks later by the big monsoon.

49. *North-east Monsoon.*—The rain generally clears off about the middle of August on the sea-coast, but the wind lasts till the end of September, when the north-easterly currents generally commence. Towards the 15th of October their full force is felt, and a heavy downpour of rain commences and lasts generally 2½ to 3 months. The heavy rain ceases towards the end of January. On the western side of the Island the north-east monsoon wind comes from the north, and is known as the "long-shore" wind.

50. *Influence of the mountain range on the distribution of the Rainfall.*—It has already been mentioned that the Central Province consists of a series of hilly ranges, which, rising from 6,000 to 8,000 feet above the sea, have a general direction from north-west to south-east at right angles to the two monsoon currents. The effect of these hills in controlling the rainfall, especially that brought by the south-west monsoon in the summer months, is very marked. Whilst the western slopes of the hills from May to September are in perpetual cloud, the eastern slopes of the central plateau are in sunshine. From the sea upwards, until we cross the highest range, there is nothing but cloud and heavy rain. Nuwara Eliya—the sanitarium, at 6,234 feet—is for months in the clouds and mist, but immediately we get on to the eastern slopes of Wilson's Bungalow, and into the eastern patana country of Uva, the rain and clouds disappear and the country is perfectly dry. As the clouds from the westward are seen to top the ridge they descend a little, and, being quickly absorbed by the hot dry air, pass on eastwards until they are again condensed on the hills of Bengal and Burmah. The eastern half of the central plateau gets only an occasional shower, and the leeside of the Island is likewise protected during these months.

51. *At a distance from the mountain system no rain falls in the south-west Monsoon.*—Immediately we get away from the influence of the hills 40 miles north of Colombo, out of the limits of what I have laid down as the moist zone, where the wind can sweep across the Island without being forced upwards by mountain ranges into a colder zone, we get no rainfall beyond an occasional shower during the whole time the south-west monsoon is blowing. It is the same in the extreme south-east corner of the Island, where the annual average rainfall of Hambantota, fully open to both monsoons, is but 37 inches, and the extremities of the Island may be said to be identically situated as regards rainfall. The south-west monsoon, affecting so small a portion of the Island, is therefore of less importance generally than the winter monsoon from the north-east.

52. *The area deriving its principal rainfall from the south-west Monsoon.*—The only area which gets more than one-third of its rainfall or any large quantity of rain from the south-west, is that bounded on the east by the central or highest mountain range running from Kandy to Nuwara Eliya and the Horton Plains. On the north and south this area may be defined by parallel lines drawn south-west from the hills near Nálanda, and from the southern extremity of the Morawak Kóralé. Within this zone, the total annual rainfall is generally over 80 inches. On the sea coast near Colombo and Galle about half of the total annual rainfall comes in the south-west monsoon, but with increased proximity to the hills, as at Kalutara and at Ratnapura, both the rainfall and the portion of it falling in the summer months increase considerably. Ratnapura is ten miles south-west of Adam's Peak, and this district, with Ambagamuwa and Maskeliya north-east of Adam's Peak at an elevation of 4,000 feet, are the wettest in the Island, having an annual rainfall of 120 to 200 inches. A few miles further into the hills and we get to valleys such as Dimbula and Lindula, protected to some extent on all sides, but backed by higher ranges to the

east than to the west. Here the rainfall again sinks to 100 inches, of which two-thirds fall in the south-west monsoon.

53. *Erroneous ideas as to the respective value of the two Monsoons.*—The south-west monsoon is popularly supposed to be that which brings Ceylon most of its annual rainfall; but this impression appears erroneous. On the assumption that the south-west monsoon begins in April and lasts to the end of September, the table annexed has been compiled. From this it will be seen that the area receiving more than half of its annual rainfall from the south-westerly currents is very restricted. It also appears that the winter rains are much more general throughout the Island, whilst the number of rainy days is less in proportion to the rainfall in the south-west than in the north-east monsoon.

STATEMENT of the Average Annual Distribution of Rainfall in Ceylon.

Position.	Station.	Elevation.	Average of years.	Average Annual Rainfall. S. W. MONSOON. April 1st to September 30th.		Average Annual Rainfall. N. E MONSOON. October 1st to March 31st.		Total Average Annual Rainfall.		Remarks.
		Feet.		Inches.	Number of rainy days.	Inches.	Number of rainy days.	Inches.	Number of rainy days.	
Moist Zone.										
West Coast	Colombo ...	21	12	44	82	43	71	87	153	Surveyor-General's Return
	Galle ...	40	12	47	114	43	83	90	197	,,
	Kalutara ...	35	10	57	83	46	68	103	151	P. W. D. Return
Under Adam's Peak	Ratnapura ...	109	12	91	130	58	93	149	223	Surveyor-General's Return
	Moist Zone—average of 4 stations ...	--	—	60	102	47	79	107	181	
Hill Country										
Western slopes	Kandy ...	1,696	12	41	115	42	83	83	198	,,
	Nuwara Eliya ...	6,240	11	60	119	39	86	99	205	,,
	Maskeliya ...	4,400	8	79	119	54	94	133	213	,,
	Dimbula ...	4,800	2	62	136	40	94	102	230	,,
Eastern slopes	Haldummulla ...	3,100	11	29	69	61	98	90	167	,,
	Haputalé ...	3,700	8	32	67	58	89	90	156	,,
	Badulla ...	2,225	6	24	28	46	44	70	72	,,
	Hill Country—average of 7 stations	—	—	47	93	48	84	95	177	
Dry Zone.										
East coast	Batticaloa ...	21	11	11	25	47	72	58	97	,,
	Trincomalee ...	175	11	16	37	43	77	59	114	,,
West coast ...	Puttalam ...	11	12	13	24	31	49	44	73	,,
Centre ...	Anurádhapura ...	312	11	18	36	32	65	50	101	,,
Northern extremity	Jaffna ...	9	11	9	19	33	54	42	73	,,
	Mannár ...	12	11	7	14	26	47	33	61	,,
South-east extremity	Hambantota ...	40	12	13	40	24	51	37	91	,,
	Dry Zone—average of 7 stations ..	--	—	12	28	39	59	46	87	

54. *The influence of the hills less in the case of the north-easterly currents.*—In the north-east monsoon the currents are of less velocity, and although here, too, the mountains give a somewhat heavier rainfall to the eastern coast, their influence is much less than with the other monsoon, nor they do not afford much protection to the parts on their leeward side. The clouds hang about the land and are condensed generally over the whole Island.

55. *The causes of the unequal rainfall in each of the two Monsoons.*—The differences in the distribution of the monsoon rains are in great measure due to the fact that in the summer the land is heated and the temperature is higher than that of the moisture-laden south-west wind. In the winter there is a fall in the general temperature of the land, due to increased radiation without a corresponding fall in the temperature of the sea, and the damp warm winds from the Bay of Bengal hang over the land, parting with a great part of their moisture. In the early winter most of the rain falls at night, which is accounted for by the rapid radiation from the soil; but as the season advances the soil gradually gets sufficiently cool to induce the atmosphere to part with some of its moisture during the day.

56. *General conclusions regarding the distribution of the Rainfall.*—It will therefore be seen:—

(1) That the principal annual rainfall of Ceylon is due to the north-east monsoon, and that these winter rains are distributed over the whole of the Island, the downpour being proportionately heavier than in the south-west monsoon.

(2) That the area affected by the south-west monsoon is very limited and is strictly confined to the country to the south-west of the dividing mountain range, no rain falling where there are no hills in the centre of the Island to force the moisture-laden clouds upwards to a colder elevation, or to lead to a condensation of watery vapour by increased pressure.

(3) That whilst on the western coast the rainfall increases with proximity to the mountains, the stations on the eastern coast have the same rainfall as those close to the hills. Again, some of the former, such as Trincomalee, have a higher rainfall than an inland station such as Anurádhapura.

(4) Again, at high elevations on the western slopes of the hill plateau the rainfall is generally less than that at lower elevations, whilst on the eastern slopes the rainfall increases with the elevation.

(5) That places like Anurádhapura, in the centre of forest-covered plains, have a much heavier rainfall than narrow strips of land close to the sea—such as Mannár, Jaffna, and Hambantota.

57. *Distribution of the average annual Rainfall shown on the Map.*—An attempt has also been made in the accompanying map to give a graphic illustration of the mean annual distribution of the rainfall in Ceylon. The rainfall stations, owing to some parts of the country being uninhabited, are at present rather unequally distributed, and this prevents any accurate delineation of the rainfall zones. The map has been divided into three regions :—

The Moist Zone
- (*a*) *The Wet Zone*—comprising the western slopes of the hills and the country south-west of them ; also, notably, the region of the special endemic flora. Rainfall 100 to 200 inches.
- (*b*) *The Moist Zone Proper*—comprising a narrow belt surrounding the last; also Uva, or the eastern hill slopes. Rainfall over 60 and under 100 inches.

The Dry Zone—comprising the rest of the Island. Rainfall over 33 and under 60 inches. This includes the Arid Zone and the Dry Zone Proper. The limits of the former, with a rainfall of 33 to 45 inches, are, in the absence of more extended rainfall observations, difficult to define ; it comprises most of the Northern Province and the Hambantota District.

58. *Points to be solved when more complete observations are available.*—There are several points which can only be solved when many of the now uninhabited parts of the Island are opened out and the observing stations can be more equally distributed. It will then be interesting to trace the limits of the minimum rainfall zones in the north-west and south-east corners, and the cause of the frequent drought in the latter. In conclusion, it should be noted that Ceylon is out of the region of cyclones.

CHAPTER II.

THE FORESTS.—GENERAL DESCRIPTION OF THEIR AREA, DISTRIBUTION, AND VEGETATION.

59. *Their origin.*—Before entering on a description of the existing forests, it is of the greatest interest to notice briefly the past history of the Island, for it forces us to the conclusion that a large proportion of the existing forests, usually spoken of as virgin or original, are but a secondary growth which sprang up on the disappearance of a large population, sometime between the eighth and the thirteenth centuries. It is important to remember this, for we shall see further on that on clearing the better timber trees out of this *secondary* forest these species threaten to disappear, leaving a *tertiary* forest, entirely different in economic value.

60. *Difficulty of distinguishing secondary and original Forest.*—It is perplexing to be unable to distinguish any material difference in the forest vegetation throughout these regions. Where certain forests grow we can ascertain from history and from the ancient remains that there were once cities and cultivated fields, but in other places without any remains there is precisely the same forest vegetation. Whether the whole area was at one time cultivated and the whole of the existing forest is but a secondary growth ; or whether from the clumps of original forest, which were probably left growing when the country was inhabited and cultivated, the same species have once more overspread the entire country, are interesting problems. The inability of the satinwood, ebony, and halmilla to make head against the other species would itself suggest that they form part of the original forest, as would the gradual supplanting of them by the secondary growth of véré* and the other worthless trees which is now rapidly progressing, materially assisted by the agency of man.

61. *Ancient Siṇhalese.*—More than 1,000 years ago Ceylon must have been inhabited by a large and powerful nation, who built the large cities, temples, and palaces of which the remains are so common in the forests of the North-Central Province and elsewhere. Frequently one finds in the depths of the densest forests, and hidden amongst the undergrowth, the massive ruins of ancient temples and palaces, overgrown with trees, and undistinguishable from the rest of the forest.

62. *Their Irrigation Works.*—Embankments, now generally breached, are found stretched across valleys or along slopes, which must have formed at one time enormous irrigation works. They were supplied with sluices of huge cut stones, and the embankments are pitched with stone or rubble—a "ripple bánd," as it was called.

63. *Seats of Siṇhalese Power.*—The seat of the Siṇhalese Power was at Anurádhapura from 474 B.C. to A.D. 769, when, on account of the frequent Tamil invasions, a move was made to Pollonnáruwa. In A.D. 1240, when the Government became disorganised and weak, the northern parts of the Island was abandoned, and the capital was removed southwards to the more inaccessible hill country, Dambadeniya, Kóṭṭé, Gampola, and Kandy becoming successively the capital.

64. *Ruins at Anurádhapura.*—The most extensive ruins are at Anurádhapura and Pollonnáruwa, the Siṇhalese capitals in the best times. These have recently been cleared, and disclose

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* *Hemicyclia sepiaria.* Weeragaha, *Siṇh.*

the remains of massive stone temples and palaces, all built of solid stone, showing by their preservation, and by the beauty of their carvings, the difficulty that must have attended the conversion of the stone. The dagobas, erected as repositories of Buddhist relics, being built of brick, have not stood the test of time so well. They have crumbled away, the *debris* covering up the carvings at their base, but the two largest are still 230 and 245 feet high. All these remains must have been built before A.D. 769, those at Pollonnáruwa being five centuries later. At Anurádhapura, too, is the celebrated Bo-tree, *Ficus religiosa*, an object of great veneration to Buddhists of all sects. As its history since the year 288 B.C., when it was brought from Urúwelaya as a branch of the tree under which Buddha underwent apotheosis, having always been more or less connected with that of the Island, can be traced up to the present time, it is perhaps the oldest historical tree in the world of authenticated age.

65. *Depopulation of the whole country.*—It is difficult to understand how so large a people can have migrated or died out. The only assignable causes of this sudden depopulation are frequent Tamil invasions and massacres, or disease, as it is not likely that a population with such fine irrigation works would migrate readily. All the ancient cities, the paddy fields, and the beds of the tanks were, until recently, covered with forest, making it impossible to distinguish original forest from the sites of buildings, and to decide what parts of the country were formerly cultivated. Only some of the larger tanks have been restored, and in one's wanderings through the forest new remains are often discovered. Frequently the path rises up a broad ridge, which on further examination is found to be artificial, and to be the bund of a large tank which, in common with the catchment area, the embankments, and the paddy fields which it irrigated, is covered with fine forest. There are now only small and scattered Sinhalese hamlets over the greater part of this country, so rich in ruins, with a population of 16 to the square mile.

66. *State of the Island on the arrival of the British.*—At the time of the capitulation of Colombo, in 1796, it is probable that the whole of the Island must have been well covered with forest, the present large towns being insignificant hamlets. Kandy itself was only a small collection of huts round the palace of the King, whilst the more thickly inhabited parts of the Central Province and the south-western corner of the Island must have been much like the North-Central Province at the present day—the villages some miles apart, and connected only by narrow footpaths. The Portuguese and Dutch only succeeded in maintaining coast settlements, and made no advance into the interior.

67. *Protective belt of forest round the Kandyan Kingdom.*—The Kandyan Kings adopted, as the most effectual means of defence, the maintenance of a dense belt of forest, 30 to 40 miles broad, all round the Kandyan or Central hill country. This forest was carefully protected, and in the attempts of the Dutch and British to seize the Kandyan country, traversing the forest belt, and subsequently keeping up communications with the seaboard, constituted always the real difficulty. This belt of forest, which protected the Kandyans so effectually, is no longer traceable, and the area occupied by it is now remarkable for the worst devastations of the chena cultivator.

68. *Forests not worked under the Dutch.*—Under the Dutch, all private enterprise was discouraged, and it was not till 1833, after the whole of the country had been pacified by British rule, and the Kandyan power destroyed, that any great progress was made in coffee planting. Up to that time the material condition of the people had probably changed but little, although the chena cultivator and others, benefiting by the absence of an organised Government, and easy taxation, had commenced to make inroads on the forests.

69. *Area of Crown Lands.—Absence of correct Survey and Map.*—Of the present extent of Crown lands in the Island there are no exact data, and it is much to be regretted that so little information is available for this report. The triangulation of the Island is as yet unfinished, and the existing maps are not only incomplete, but misleading. Fraser's map, on a scale of 4 miles = 1 inch, is most inaccurate. Provincial boundaries are 15 miles out; roads and tanks are out of position; villages appear that have not existed during the present century; and rivers are made to run in entirely wrong directions. The map has, on the other hand, a most finished and accurate appearance, which is most deceptive, and quite different to the character of the information it supplies.* The map with this report is a copy of that accompanying the Road Itinerary (edition of 1881)—a reduction, apparently, from Fraser's, on which the same errors are repeated. After marching about the Island, I am, however, able to suggest a few corrections as to provincial boundaries, &c.

70. *The importance of exploring the Forests an additional reason for making a Survey.*—The importance of exploring all the forests, and of ascertaining what area of good forest there is, would alone be a strong motive, if no other exists, for a survey of the Island being completed at an early date. Unless some approximate idea is gained of the forest area, it is useless to talk of working the forests on correct principles. Although the absence of roads, villages, &c., in many

* This statement will show some of the difficulties, such as Capt. Walker and Mr. Clarke meet with, in trying to lay down the forest boundaries. Amongst the errors that may be pointed out are: the position of Padiviya Tank—which should be 20 miles from the sea and about 16 miles from Világkulam instead of 7, and of the provincial boundaries here—the Northern Province boundary coming really up to the tank bund. The North-Central Province boundary near Pomparippu, according to the map, is 7 miles inland, yet I have been 15 miles inland, and the North-Central Province was said to be 10 miles further on. The boundaries of Tamankaduwa are incorrect. In the Eastern Province, almost the whole of the Maha Vedderata (of Fraser's map) is in the Eastern Province, the boundary running to Falschood, and then close to Gohindegagalla (Westminster Abbey). Comparing the map of this report with the Itinerary map, it will be seen how large this error is; the area contains villages that have always paid their revenue into the Eastern Province treasury. Mistakes such as these are, to say the least, confusing; but when the position of many well-known landmarks, such as Small Quoin, is incorrect, and when it is the exception in the dry zone, to find a village entered on the map correctly as to name or position, there is really no point of which one can feel sure, and which may thus be used as a starting point in mapping out the forests. To give a list of such errors would be useless, when they are known to all the Foresters and other local officers; and I have only mentioned a few of those which I have seen during my rapid march through the forests.

Provinces will always delay the acquisition of correct data, and render exploration difficult, work would progress rapidly, if systematically carried out, with a *skeleton map* as a basis to work on. If each Forester were provided with the latter, a large quantity of valuable information would soon be collected about parts of the country which are seldom visited by other officials. Certain precautions would have to be taken to ensure accuracy, and all the Foresters would zealously co-operate in the work if given proper encouragement. At present, it is almost a hopeless task to represent the distribution of the forests on the map correctly.

71. *Present calculations as to the area of Forests.*—At present, calculations as to the area of the forests can only be based on the figures representing the sales of Crown land since 1833. Since that year all land sold has been surveyed, and deducting the areas sold from the estimated area of the Island, making also an approximate allowance for other sales, grants, &c., we arrive at the gross area of Crown land. Of sales before 1833 there are few records, whilst of land given away on grant or sold by the Dutch or Sinhalese, and of lands held on service tenure, or by right of 30 years' occupation, there is no complete return. The areas of village communal waste in the Kandyan districts have also not been defined, so that only the roughest approximation as to the extent of Crown property is possible.

72. *Area of Crown Land sold.*—Soon after 1833, the roads, which now extend all over the present planting districts, were commenced, and between that year and 1880 an average of 25,000 acres of Crown land has been sold annually, of which a large proportion has been bought and cleared by European capital and enterprise. About 1,840 square miles of Crown land, constituting roughly 1-12th of the total area of the Island, were thus alienated between 1833 and 1880. Taking the total area of the Island at 15,809,280 acres, Ferguson's Directory gives the area of Crown land sold from 1833 up to the end of 1880 at 1,177,086 acres, realizing Rs. 18,716,890.* These figures do not comprise the areas disposed of in earlier times by grant, sale, &c., which are estimated at 2½ million acres. Roughly therefore, the area of private lands is 3¾ million acres, or say, one-fourth of the Island. Of the remaining three-fourths, the greater part belongs to the Crown.

73. *Areas bought by Europeans.*—It is interesting to note here, that of the areas sold, 750,000 acres are estimated to belong to Europeans, 500,000 acres having been bought in the hill country for coffee, tea, cinchona, &c., and 250,000 acres in the low country for the cultivation of tea, Liberian coffee, cocoa, cocoanuts and cinnamon. By far the greater part of the Crown land sold is situated in the hilly and damper parts of the Island, and probably there the areas belonging to the Crown do not equal more than one-fourth the total area, if so much; for, although the Surveyor-General's figures show the uncultivated area to be over two-thirds of the whole, it must be remembered that no small proportion of this would be claimed as village communal waste, or under Ordinance 12 of 1840 in individual right, if a land settlement and a general registration of all claims were made.

74. *Sale of land in the Dry Zone.*—In the drier parts of the Island the sales of land have been fewer. European enterprise has not opened up the country, and the only change within the last 100 years, has been brought about by the restoration of old village tanks in the North-Central and Northern Provinces, and by the construction of new irrigation works along the eastern coast. Probably nine-tenths of the whole country still belongs to the Crown.

75. *Acreage of the Colony and Proportion of Cultivated and Uncultivated Land.*—The following statement is given for reference. The figures are those of the Blue Book, 1881. Of the Kurunégala District, one-third has been included in the dry zone; of Badulla and Mátalé, an equal division between the dry and moist zones has been made.

Province.	District.	Estimated acreage of the Colony.	Estimated acreage of *cultivated land.*	Estimated acreage of *uncultivated land.*
Moist Zone.		Acres.	Acres.	Acres.
Western ...	—	2,140,800	733,990½	1,406,809½
North-Western ...	⅔ Kurunégala ...	556,586⅔	153,276⅔	403,310
Southern ..	Galle ...	348,160	112,234	235,926
do ...	Mátara ...	316,160	111,601	204,559
Central ..	Kandy ..	558,080	241,702	316,378
do ...	½ Mátalé ...	289,600	40,310½	249,289½
do ..	½ Badulla ...	1,162,240	102,536½	1,059,703½
do ..	Nuwara Eliya ...	231,040	122,446	108,594
	Total, Moist Zone...	5,602,666⅔	1,618,097½	3,984,569½
Dry Zone.				
North-Western ..	Puttalam ...	1,103,680	104,563	999,117
do ...	⅓ Kurunégala ...	278,293⅓	76,638⅓	201,655
Southern ...	Hambantota ...	568,960	99,682	469,278
Central ...	½ Mátalé ..	289,600	40,310½	249,289½
do ..	½ Badulla ..	1,162,240	102,536½	1,059,703½
Eastern ..	—	2,246,400	245,386	2,001,014
Northern ...	—	2,016,000	144,774	1,871,226
North-Central ...	—	2,541,440	74,412	2,467,028
	Total, Dry Zone...	10,206,613⅓	888,302⅓	9,318,311
	Total Acreage...	15,809,280	2,506,399½	13,302,880½

Further information will be found on pages 42 and 43 of that useful book.

76. *What proportion of the uncultivated waste is Timber Forest.*—The figures given in this statement are conjectural, but there are no others to base our calculations on, and they are probably proportionately correct. To determine what part of the uncultivated Crown lands is covered with forest is difficult. Originally, when the country was opened up by the British, it is probable that the greater part of the Island was covered with good timber forests, the following being the principal areas not so covered. In the Northern Province, and throughout the rest of the dry zone, within two to five miles of the sea, there is a good deal of open bush country—not unlike the Panjab Rakhs—with clumps of rather stunted bushes and thorny trees, separated by large open stretches of grass.* On the north and west sides of the Island, as far south as Puttalam, and in the parts between Potuvil and Hambantota (the south-east corner of the Island), the country within two to five miles of the sea (or even twelve miles in the Hambantota district) is chiefly of this character; not continuous, being often broken in places by good forest going down to the sea-beach, or separated from the sea by a strip of forest one to two miles broad.

On the eastern side of the Island is the so-called Park Country (Nilgalla-paláta), of a park-like character, the trees standing singly or in clumps in fine open stretches of grazing land. In the North-Central Province, especially towards Minéri, Pollonáruwa, and in Tamankaduwa, there is a good deal of low land, often with sour black soil, on which only a few Palé, Acacia leucophlæa, Bauhinia tomentosa, Cassia marginata, &c., grow. Finally, in the hills, there are at all elevations the patanas or downs, covered with coarse grass or a few Careya arborea, Rhododendron, &c.

These may be said to constitute the chief exceptions to the rule—that the whole of Ceylon was at one time covered with forest. For these, for the large areas of natural scrub forest in some parts of the Island, and also for the areas of village tanks, roads, rivers, &c., we may make a liberal allowance of four million acres, or one-fourth the area of the Island, and then half the area (8 million acres) is left, on which the absence of forest is not explained by any natural causes. In a climate so favourable that forest will grow on the worse soils, probably the whole of this area would be covered with good timber but for one cause—chena cultivation. How vast the areas of forest are which have thus been destroyed, I shall now endeavour to give some idea.

77. *Chena cultivation.*—Chena is the Ceylon form of the Indian kumri or jhum, and the Burmese toungya, and as in those countries, it is a favourite means of earning a livelihood. It is so well known, that it scarcely needs any description. The cultivator goes into the virgin forest and fells all but the largest trees. Having allowed the wood and branches to dry for one month or so, he sets fire to the whole. When the ground is fully cooled the surface is slightly raked to work in the ashes, and afterwards sown with rági, hill paddy, or maize; a rough fence is made of the unburnt logs, and the chena is left till the grain begins to ripen. After the first crop is reaped, gingelly, maniok, amu, or hén-kękiri (Cucumus utilissima) are usually taken off the land as a second crop, and then twelve months after the first clearing the soil is finally abandoned.

78. *Chena cultivation as compared with Paddy.*—Chena cultivation has always in Ceylon enjoyed special advantages, as regards taxation, over paddy, the only permanent food grain cultivation, and this, combined with the enormous returns—reaching 120 to 500-fold†—which are obtained for the minimum expenditure of labour, has caused it to be a favourite method of cultivation with a thriftless indolent people. Paddy cultivation is most laborious, and requires unremitting attention and watching. The return is uncertain, especially since in late years the seasons have become so irregular. In chenas, two slight showers are sufficient to ripen the crop. This, with light taxation, unlimited extent of land, and the possibility of securing by one month's labour, of which the wife and children can do a large share, sufficient grain for twelve months' consumption has, assisted by many other circumstances, caused this destructive form of cultivation in some parts of the country gradually to absorb all the forests. In the Blue Books between 1870 to 1881, it will be seen that the area of dry grain cultivation has doubled. The area of paddy cultivation in the same period shows no material increase, notwithstanding the construction of irrigation works, whilst in some districts the revenue officers record a marked decrease, accompanied by an increase in dry grain cultivation. In whatever way we look at it, paddy cultivation has been at a disadvantage, especially when a native knows that, if he grows paddy, he must be subject to great extortion by the "renters," whereas to his solitary forest chena the renter will not pay many visits, and then, although he has to give up one-fourth of the crop, it is better to do that, when the area can be easily extended, than risk the loss of the crop by having to wait until the renter choses to come and allow the paddy to be threshed.

79. *Effect of Chena generally.*—The effect of chena cultivation is not only that an enormous amount of good material is wasted and burnt—the larger trees left standing being all killed by the fire—but the character of the vegetation is completely changed, and the more frequently the same area is cleared, the less the growth resembles the original forest.

80. *Soil and character of vegetation changed.*—Chena ruins a poor soil like we have in Ceylon, and a thorny-stunted scrub growth comes up which only grows to a height of 20 to 30 feet. Only after seeds of the better kinds of trees are blown in from the neighbouring forest do timber trees once more grow up. Thus 40 to 50 years may elapse, and it is evident that as more forest is destroyed the less chance there will be of seeds finding their way to the chena, whilst the more frequent the clearing the more the soil deteriorates. In this way, with nothing but chenas for miles, it might take hundreds of years before the ground once more became clothed with forest, even if it were left undisturbed.

81. *Effect in the Eastern Province.*—The above are the results when the soil is only cultivated for twelve months, the reproductive power of the tree-stumps not being entirely destroyed;

* It is in country of this sort and in the Park Country, that most of the game, especially spotted deer and buffalo, is found, and in the wet season, elephants. In the forests there is little game but "elk" or sambur.

† Dr. Roxburgh.

but in the Eastern Province chenas are cultivated for three or four years. The Moormen of Batticaloa, now as in Sir H. Ward's time, supply the capital and the seed, whilst the poor Siṇhalese or Veddahs get the chena permit and cultivate, the Moors taking the greater part of the crop. Kurakkan is succeeded by maize, then come cucumbers, to be followed by maniok and, finally, plantains. The latter stand for eighteen months, and by the time the patch is abandoned the soil is so thoroughly exhausted that even the usual chena scrub refuses to grow. Nothing comes up but Illuk grass (*Imperata arundinacea*) and a few straggling stump shoots of *Pterospermum suberifolium*, which are gradually killed off by the annual fires, for in the Eastern Province every year during July and August the horizon is now darkened by the smoke of the burning grass on these old chenas. The damage does not stop here, for each year a circle of trees round the burning patch is killed by the fire, and the area of grass extends itself, or the fire frequently rushes into the standing forest for some distance, damaging the trees and killing all the seedlings.

82. *Effect of chena less severe than in India and Burmah.*—The effect of this mode of cultivation in Ceylon has been less disastrous than in India and Burmah. There the population is large, the area of uplands suitable for growing dry grain crops is limited, and this, combined with certain restrictive regulations, has tended to confine the cultivation within narrow limits, forcing the people to return to the same land, and to clear it after only six to ten years' rest. Both in India and Burmah there is also a long hot weather, drying up the soil and causing forest fires. The soil, exhausted with such frequent cropping, declines to grow anything but sparse jungle and grass, and the entire character of the country and climate is changed.

83. *Large area for clearing in Ceylon.*—In Ceylon the supply of land has always been large for so scanty a population; chena crops can be grown anywhere, and fresh forest or 40 to 50 years' chena growth has generally been available for clearing. Although the soil is so bad, the equable humid atmosphere and abundant rainfall cause a dense growth of thorny scrub to come up, which, though perfectly useless in other ways, serves at least to protect the soil.

84. *Most harm done in the Siṇhalese country.—Appearance of the country.*—It is in the Siṇhalese parts of the Island that the chena cultivator has done most harm, and having had uncontrolled command over all the forest, has succeeded in clearing away most of it. The least observant traveller by rail to Kandy and Náwalapitiya cannot fail to notice the general absence of high forest, the enormous areas of scrub, whole hillsides—one unbroken sheet of dense bushy growth—the annual succession of clearings being marked by the different shades of green, from the grey of the recent clearing, to the bright green of the two or three-year old bushes, and the dark green of those ten years old. Or, ascending any of the peaks, he will see before him nothing but a vast sea of one uniform growth, consisting mainly of Lantana or *Beesha stridula** in the moist zone, with perhaps a wooded knoll here and there, which being too steep and rocky for cultivation, has been left; or, in the low dry country, he will be able to trace into the far distance the rivers and depressions, by lines of taller trees of darker hue, showing where the devastator has found Kumbuk trees, *Terminalia glabra* or *Mi* (*Illupi, Tam.*) *Bassia longifolia* too big for the axe, or where in the lower ground on the river banks, the scrub has grown up rather more rapidly. No more deplorable sight could be found, and the only reflection is, what might have followed similar ill-treatment in a country less favoured in climate. The extent of chena, in one unbroken stretch, is such as Burmah or India never saw.

85. *Central Province—Destruction caused by chenas.*—It is difficult, until the forests are carefully examined, to express in figures the devastation that has taken place. The Central Province has an area of uncultivated land of over three million acres. Allowing 100,000 acres for the reserved forests at over 5,000 feet elevation, and 400,000 acres for patana land. roads, &c., the total area of good forest, out of 2½ million acres of waste land, is not more than 30,000 acres.

86. *Kandy, Badulla, &c., Districts.*—In the large Kandy district with 316,000 acres of waste, there is, I am told, beyond a few rocky ridges at the lower end of Dumbara, one forest only (Tumpané). In the Badulla district, the largest in the Island, with 2,119,000 acres of uncultivated land, I was not able to hear of more than a few 100-acre patches on rocky knolls. There is an unbroken stretch of chena from the Kumbukan-aar to the northern end of Bintenna, a distance of 60 miles. In breadth, this chena scrub extends from the foot of the hills to the Eastern Province boundary, a distance of some 25 to 30 miles, the boundary line being distinctly marked—by chena scrub on the Badulla side—by fine forest on the Eastern Province side. The only forests in the Central Province are in the Mátalé district, and here too the chena cultivator is busy. Half of the district, at least, is said to be nothing but chena and scrub, with patches of forest left on the very rocky slopes. Even when we come to examine the forests, they are found to be more or less cut up into small blocks by large intervening stretches of scrub.

87. *Western Province.*—On the western side of the island the state of things is very much the same. In the Western Province, with 1,400,000 acres of waste, we could probably not find more than 100,000 acres of good forest even including patches of 150 acres and under. In the

* *Beesha stridula.—Batali* covers thousands of acres in the Western and Southern Provinces. In the Southern Province, lantana has not spread so extensively as in the Western and Central, and this small bamboo, growing to a height on old chenas of 6 to 10 feet, generally springs up within a year or so of the crops being reaped. It grows in dense thick masses, and like the Illuk grass in the Eastern Province, it gradually encroaches on the forest. After it has grown up to some height, the ground is covered with a dense mass of dry stems and leaves, which in dry weather take fire readily; each time the scrub is fired a fresh row of trees round the edge of the forest is killed, and the Batali replaces them. For the chena cultivator nothing could be more convenient, as it saves him the trouble of clearing. In the Southern Province—the Hinidum Pattu especially—may be seen large areas of soil so exhausted that it will only grow ferns—*Gleichenia dichotoma.* Here, too, after two or three years' growth, sufficient dry material accumulates, to admit of the whole being fired. This the natives do as often as they can to induce tender shoots of grass to come up, and the forest is slowly but surely encroached on. The same process may be noticed in the Southern Province about Batapola, where the annual firing of the grass in the swampy low lands leaves its mark in the shape of dead trees on the edges of the surrounding forests.

Kégalla District, with 289,000 acres uncultivated, there are said to be no forests of over 500 acres. In the Kurunégala District, North-Western Province, with 600,000 acres uncultivated, we pass through nothing but chena from Chilaw to Kurunégala, and thence to Diyatura, Nikawęratiya, and Polgahawela, a total distance of 90 miles, along which there is no large block of forest within five miles of the road on either side. It is the same in the Southern Province, or rather worse, if that were possible. Figures such as these, although they cannot pretend to great exactness, give a reliable idea of what destruction chena cultivation has caused, and how intimately a solution of the question concerns the forests.

88. *Dry Zone.*—In the drier parts of the Island immense damage has been done, but owing to the population being scanty, the areas cleared are on the whole much smaller. It is not, however, the difference in climate which has saved these forests, for the greater part of the Badulla District already alluded to is in the dry zone. It is in the latter, too, that the most marked increase of dry grain cultivation, accompanied by a decrease in the production of paddy, has of late years taken place. (See Annual Reports, 1880, Mullaittívu and Hambantota Districts.)

89. *Area of Forests in the Moist Zone unknown.*—Without a record of the areas cleared for chena, and until the vast areas of Crown land have been thoroughly explored, accuracy in estimating the area of the forests is impossible, especially when many of the so-called forests on the western side of the Island consist of small patches, generally under 100 acres, surrounded on all sides by chena clearings. In the Western Province there are still some forests of workable size left on the Kélani-gaṇga, and on the Kalu-gaṇga, with larger ones in the inaccessible Kukulu kóralé and Siṇharája country. From some of the former revenue can always be made, but many of the finest forests have, as is explained elsewhere, been sold along these rivers, and there is great uncertainty as to the actual extent still belonging to the Crown. In the southern parts of the Kurunégala District, and in the Galle and Mátara Districts of the Southern Province, the best forests have been sold or cleared, and the Crown is forced to get its timber from distant forests, difficult of access, or else to buy from the persons to whom it originally sold the forests.

90. *An estimate impossible.*—Any approximation as to the area, when so little is known, would therefore be valueless; and it can only be said of the moist zone generally, that the forests left are chiefly in small isolated blocks, and that their present area, if most carefully preserved from further diminution, will be barely sufficient for the ordinary requirements of the public.

91. *Area of Forest in the hills.*—In the hill country the area of forest left is very small. There is a reserve of about 100,000 acres on the highest ranges at an elevation of over 5,000 feet. The only forests of any size at elevations under 5,000 feet are situated in the accessible country of Adam's Peak, on the south-west slopes, with an annual rainfall of 200 inches. These are to be retained as climatic reserves, and from their position would never be valuable for any but a small local supply of timber and firewood.

92. *Area of Forests in the Dry Zone.*—In the dry zone the areas of forest are so large, whilst they are so mixed up with scrub, and such a large extent of country is still unexplored, that it would be useless to attempt any estimate of their extent. The uncultivated area is given at nine million acres, from which large deductions must be made for the coast belts, the Park Country, &c. The areas of chena scrub too are so enormous, that without a detailed examination of the country block by block, with an accurate map, no approximation even can be made. With nothing but my own personal impressions to work on, and without official records to assist me, it would be misleading to give any figures. Probably one-third to one-half of the uncultivated area in the dry zone is covered with forest trees—not good forest, but valuable timber trees mixed with unsaleable or worthless woods in every proportion, often of course interrupted by considerable stretches of scrub.

THE GENERAL CHARACTER OF THE FOREST VEGETATION.

93. From what has been said before, it will be understood that the general character of the Island consists of a central range of hills, rising to a height of 8,000 feet, surrounded on all sides but the west and south-west by level plains, which extend to the seashore for a distance of 40 and 50 miles on the south and east, and for 170 miles to the north, with a rainfall from 35 to 59 inches. To the west and south-west of the range we have a hilly country with a rainfall of 60 to 200 inches. The character of the vegetation depends in all countries on situation—comprising soil, aspect and elevation—and on climate, of which humidity of the atmosphere and rainfall are the principal factors.

94. *Littoral Vegetation.*—The vegetation round the coast, on the banks of the broad tidal estuaries and salt lagoons, only connected with the sea when the inland rain water has accumulated sufficiently to force open the bar, is much the same all round the Island. There are several species of mangroves, and the vegetation resembles that round the Indian coast. The cocoanut flourishes everywhere, but in the drier parts of the Island it is difficult to rear, and only between Negombo and Mátara, in the south-west corner, does it attain its full size. Towards the northern end of the Island it is replaced by the palmyra palm, which, with its 801 different uses, plays an important part in the domestic economy of the Tamils. In all the coast settlements Thespesia populnea—Surya or Tulip tree—is the common avenue tree; it is probably not indigenous, and is not found in any of the forests. Its timber is much valued for coach building.

95. *Influence of the Rainfall.*—A few steps from the seashore and the influence of the rainfall on the vegetation is immediately evident, and the great variety of climate and elevation has led to the two great subdivisions, which may be called the *dry zone* and the *moist zone*, comprising respectively three-fifths and two-fifths of the Island, each of which again may be subdivided into distinct zones.

THE DRY ZONE.

96. *Rainfall, elevation, &c.*—The rainfall here is from 30 to 59 inches, of which most falls between October and January; in the eight months' interval little rain falls, and there is a long dry season, during six months of which a strong hot wind blows continuously from the south-west. Elevation up to 1,000 feet, but generally little raised above sea level.

97. *The influence of Wind and the character of the Rainfall on the Vegetation.*—In estimating the influence of rainfall, the mere figures, as shown by the rainguage records, do not account fully for the distinct regions of vegetation which are noticeable. A moderate rainfall, if only in the form of slight showers at frequent intervals, is of course better for vegetation—especially one which has chiefly surface roots, as in our Ceylon forests—than a heavier downpour, which drains off rapidly, and is succeeded by a long drought. The south-west wind, which is prevalent during five or six of the hottest months of the year, is no small factor in aggravating the effects of a long drought. To these two causes may be attributed in some degree differences in the natural vegetation of the dry zone, such as are not distinctly traceable to variations in the rainfall.

98. *Distinct regions of Forest vegetation.*—The separate regions into which the dry zone may be sub-divided are :—

(*a*) *The Arid Zone.*—Rainfall 35 to 45 inches. Comprising the greater part (especially the westerly side) of the Northern Province, including the island of Mannár ; also the Hambantota District. Vegetation stunted and thorny. A patchy stunted forest of palé, véré, &c., with an undergrowth of Carissa diffusa, Zizyphus Jujuba,* Z. rugosa,* Z. Œnoplia* and nillu (Stenosiphonium) is most characteristic of this zone. Intermixed with this forest are depressions, covered either with grass (Villus in the Northern Province), or with bushes of Acacia eburnea, Erythroxylon monogynum, Dichrostachys cinerea, Feronia Elephantum, Zizyphus Jujuba, Z. rugosa, Cassia auriculata, or Salvadora persica (chiefly near the sea.) On the better soil palé is the only saleable forest tree, with Elæodendron glaucum, Hemicyclia sepiaria, &c.; acacias such as A. Suma, A. leucophlæa, are common everywhere. A. planifrons is a tree characteristic of the island of Mannár.

99. (*b*) *The Dry Zone Proper.*—Rainfall, 45 to 60 inches. This comprises the remainder of the dry zone, as shown on the map, and includes the principal forests. The vegetation is more luxuriant and has less of thorny stunted character. Important forest trees, which are rare in the arid zone, begin ; satinwood, ebony, halmilla and milla are common, and many new species, such as Pterospermum suberifolium, Nephelium Longana, Polyalthia coffeoides, Mangifera zeylanica, &c., come in. The forest becomes a close grown mass of trees, although not everywhere growing to a great height. Owing to the causes alluded to there are considerable variations in the vegetation, which, although not coincident with the distribution of the rainfall, are well marked by the presence or absence of certain trees.

GENERAL CHARACTERISTICS OF THE FOREST VEGETATION IN THE DRY ZONE.

100. The forests are almost entirely evergreen, very few species being ever leafless, whilst of those that do lose their leaves—satinwood, Schleichera trijuga (*Kong*), Excœcaria (Falconeria) insignis (*Tité*)—only the last mentioned remains bare long. The distinguishing characters of the forests are great density and compactness of growth, general uniformity of size with inferiority of girth and height ; a dense undergrowth of arboreous shrubs and sometimes nillu (Stenosiphonium), with a marked absence of herbaceous surface growth, such as grass, &c. In nearly all the forests we find the ground covered with a great variety of species crowded together, all struggling and hustling one another for light and air, without any being able to shoot up to a good height or to assume a dominant position. The average height of the trees is about 30 to 50 feet—rarely over 60 feet: all the species grow to the same height, three only—satinwood, palé and halmilla—making much show above the rest.

When the trees have reached their maximum height they form very broad flat crowns, which interlace, and besides serving to throw an impenetrable shade on the soil, keep out the wind which blows so steadily for the greater part of the year. Above the flat umbrella-shaped tops of the other trees, satinwood and halmilla can be distinguished at a great distance by their isolated crowns. The girth of the trees is small, and after reaching a certain size never increases much. Except of satin and palé, trees of six feet girth are rare, and the majority of species forming the forests are never more than three feet in girth. Halmilla, one of the most valuable timbers, is rarely over four feet in girth. The absence of dominant trees is remarkable, as is also the want of predominance of one or more species in the forest, such as generally results from their superior vital power or from their longevity. Whether this and the small size of the trees are due to poverty and want of depth in the soil, is a matter for conjecture. The growth of all the species is very slow, with the exception of halmilla, which sometimes appears to be rapid.

101. *Undergrowth.*—Instead of herbaceous undergrowth, (nillu being chiefly confined to inferior soil and open forests),† a dense undergrowth of arboreous shrubs or of seedlings of the larger trees springs up, forming a miniature forest six to ten feet high, and rendering progress, except along a cleared path, almost impossible. There is a want of humus, the poor soil being covered only with a thin layer of leaves. Except during the north-east monsoon, the soil is generally dry, but at the same time well protected against the wind and the sun by the dense shade of the trees and the undergrowth. The south-west gales pass over the forest, unable to penetrate the dense growth and the natural protecting barrier formed by the entwined crowns, and the air inside the forest is quite still.

* Chura, Tam.; Eraminia, Sinh. I am in doubt as to which is best known by these native names. Z. rugosa is the commonest in the dry zone, and Z. Œnoplia where there is a heavier rainfall.

† Of the dry zone only can this be said. In the moist zone and in the hill forests, the nillu undergrowth is of quite a different character, and does not appear to be characteristic of any particular soil. The species too are quite different, although passing by the same native name.

102. *Veré, the most characteristic tree.*—The most characteristic tree of these forests is Hemicyclia sepiaria—Veré (Wera-gaha, Siṇhalese), with its curious fluted stem. It is the commonest in all forests of the dry zone, and in many there are more of this peculiar tree than of all the others put together. The stem assumes irregular shapes, rarely straight and round, with longitudinal flutings, which are often split off for axe handles; the girth seldom exceeds 2½ feet, with a low spreading crown. It appears to be often a sign of bad soil and of old chenas, for some of the fine forests in the Eastern Province are almost free of it, whilst on adjoining patches, with many other unmistakeable signs of old chena cultivation, it forms one of the principal trees.

Another most characteristic tree, although not entirely confined to the dry zone, is Terminalia glabra, of little value as a timber tree, but forming a very graceful object round the numberless tanks, which are in themselves a remarkable feature in the scenery of this part of the Island. All the streams are bordered with it, and no other tree approaches it in size.

103. *Timber trees of the Dry Zone forests.*—The trees of the dry zone forests which yield the only timber saleable at present are :—

Ebony (Diospyros Ebenum)
Satinwood (Chloroxylon Swietenia)
Halmilla* (Berrya Ammonilla)
Palé (Mimusops indica)
Milla* (Vitex altissima)
Wavarani or Yavarani (Persea [Alseodaphne] semecarpifolia)

104. The following are the commonest species mixed up with the saleable timbers :—

Venangu (Pterospermum suberifolium),†
Murali or Mora (Nephelium Longana)†
Moré (N. Gardneri)
Vedekanari (Diospyros ovalifolia)
Chemelpanichi (D. crumenata)
Panichi (D. Embryopteris)
Kulodi (Chickrassia tabularis)
Aili (Ulmus integrifolia)
Rukkatana (Alstonia scholaris)
Mi (Bassia longifolia)
Kaditoni (Sterculia fœtida)
Kanchura (Strychnos Nux-vomica)
Kuma (Glenicia zeylanica)
Punerai (Sapindus emarginatus)
Koketiya (Garcinia terpnophylla)
Tirkundel (Cassia Fistula)
Naval (Eugenia Jambolana)
Kolon (Adina cordifolia)
Helambé (Stephegyne parvifolia)
Kong (Schleichera trijuga)
Vela maram (Acacia leucophlæa)
Pieri (Elæodendron glaucum)
Tammana (Mischodon zeylanicus)
Kumbuk (Terminalia glabra)
Munamal (Mimusops Elengi)
Vammi (Sarcocephalus cordatus)
Lunimidella (Melia dubia)

105. The following are the principal species comprising the undergrowth :—

Kaian (Memecylon edule)
Do. (M. grande)
Manchuvana (M. capitellatum)
Kannu (Anstrutheria zeylanica)
Ulavinté (Polyalthia Korinti)
Karani (Webera corymbosa)
——— (Taxotrophis Roxburghii)
Klaka (Carissa diffusa)
Nelli (Phyllanthus Emblica)
Tuvere (Maba buxifolia)
Taintuki (Dimorphocalyx glabella)
Gulserú (Premna tomentosa)
Nillú (Stenosiphonium)

106. Locally, as in the Eastern Province, the following become fine timber trees, and are common :—

Katupulian (Dialium ovoideum)
Mara Illipé (Polyalthia longifolia)
Nedunari (P. coffeoides)
Vella-karungali (Diospyros oocarpa)
Tumpalé (Vatica sp.) [*Beddome*)
Tombúkata (Calophyllum elatum,
Churapunné (C. Burmanni)
Do. (C. tomentosum)
Wild mango (Mangifera zeylanica)
Punné (Calophyllum Inophyllum)
Marungé (Eugenia zeylanica).

107. *No demand for most of these woods.*—For the majority of these woods there is not the least demand; occasionally in the Eastern Province a few wild mango, kumbuk or tombúkata are cut to make canoes, churapunné for the spars of dhoneys, or in the North-Western Province, tammana for building; but the small demand for all woods, other than those mentioned in paragraph 103, is best shown by the fact that for the last six years, the average annual number of trees cut on permit in the Batticaloa District has been only sixty-five.

108. *Small proportion of saleable Timber.*—The great variety of species has already been alluded to, but the small proportion of the valuable timber to the valueless is still more remarkable. The general condition of the forests is, that trees of one or more of the saleable kinds are mixed up with a very large variety of the valueless woods. The former never exist as a pure forest by themselves, and collectively, even in the most favorable situations, never form more than one-tenth of the whole. It is only in the fine forests of Bintenna, in the Eastern Province, and on some parts of the western coast, that satinwood, ebony and halmilla compose this share of the standing growth. In nine-tenths of the forests of the dry zone the saleable woods do not form more than 2 per cent. of the whole. Looked at from a professional standpoint, the forests are most disappointing. They exhibit very poor growth, and the great mixture of species suggests at once great difficulties of management, and comparatively high working expenses. For our timber

* These names might be adopted, being a transliteration of the Siṇhalese words, in preference to the Anglicised halmililla and mililla, which are incorrect and unintelligible to village Siṇhalese.

† These two are very common, and in some forests form one-third of the trees.

supply, the annual operations must cover a very large area, which will necessarily involve great cost in road-making, &c., and in supervision.

109. *Difficulties in treating the Forests.*—Throughout the same great difficulty of treatment presents itself. The valuable trees are far apart and are much in the minority. They are slow growing, and especially in the case of one of the most important—satinwood—do not bear shade well. In cutting out an ebony or a satin tree we rarely find any young seedlings or saplings of the serviceable woods near. Forming a compact forest all round, are trees and saplings of all the unsaleable, valueless kinds, with a dense underwood of the same or allied species, ready to fill up the gap, and to choke any seedlings of the better kinds which may spring up.

110. *Absence of the better kinds in the undergrowth.*—Before the felling, the seedlings of the better kinds of trees rarely take root in the dense shade, where they stand a poor chance in the struggle with the dense arboreous underwood. The latter, with its dark-green leathery leaves, scarcely suffers at all from the shade; it waits patiently for its opportunity, and immediately an opening is made, shoots upwards and soon outgrows the satin or the ebony seedlings.

111. *Bad reproduction of Ebony and Satinwood.*—The bad reproduction of both ebony and satinwood, especially the latter, is very striking. In none of the forests, where fellings have lately been carried out, is a fair proportion of young trees to be seen, and I can only remember one forest in the North-Central and North-Western Provinces with any number of young satinwood trees.

112. *Halmilla.*—Of halmilla the reproduction is far better, but still it suffers considerably from the shade of the worthless trees, and has failed to reproduce itself completely over most of the large areas, which it formerly covered in the Eastern Province.

113. *Palé.*—With palé, reproduction is as unsatisfactory, and in the Northern Province, where this tree is quite at home, we notice everywhere the absence of young trees and of seedlings, other faster-growing ones having got the upper hand.

114. *The same want of reproduction in all the Provinces where the traders worked.*—The same defects in the natural reproduction will be observed wherever the traders worked. In the Mullaittívu District for instance, where the timber registers show large quantities of ebony, satinwood, palé and halmilla to have been cut, these species appear to have been generally replaced by others. When circumstances are more favourable, as on the hills of the North-Central and North-Western Provinces, there are considerable numbers of young ebony, but nowhere, even with the most suitable soils, can the same be said of satinwood. The sickly appearance of all satinwood undergrowth fully accounts for this tree not being more largely represented in the secondary forest.

115. *Assistance necessary in aiding the natural reproduction.*—This can only be most discouraging, warning us that nature will require assistance, and that to allow the better trees a chance in the struggle, continual attention will probably be required in keeping back the worthless kinds.

116. *None of the saleable woods coppice.*—None of the saleable woods, unless cut when young, throw out serviceable coppice shoots. Clusters of shoots come up round the stumps, which only grow to a height of three or four feet and then die down. When forest is cleared for chena, the satinwood sends up clusters of shoots from the stump and also root-suckers, and to this circumstance is probably due the statement appearing in many reports, that this tree reproduces itself in chenas. The shoots, of which ten to fifteen are generally found on each stump, only grow to the same height as the chena bushes, and never become trees. The same want of care in making observations has led to forests being described as having a good deal of ebony, when the true ebony was mistaken for trees such as D. oocarpa, D. crumenata, D. affinis, that resemble it in the appearance of their stems.

117. It will here be useful to add a few more general remarks regarding these forests and their present condition.

THE ARID ZONE.

The Northern Province.

118. *Compared with India.*—Although parts of the Mullaittívu District resemble more closely the vegetation of the North-Central Province, it will be easier to describe the whole of the Northern Province as one. The species here are similar, and in many cases identical, with those in the Tanjore and Madura Districts on the Eastern Coast of India. The rainfall may be generally taken as 40 inches, corresponding with 17 inches at Tuticorin, 32 inches at Madura, and 28 inches at Trichinopoly, in which may possibly be traced the influence of the wind, so continuous for six months of the year, as opposed to that of the rainfall. The mainland, with a smaller rainfall, being protected to the south-west, has quite as rich a vegetation as this part of Ceylon.

119. *Principal Timber.*—Palé may be said to be the principal timber tree; satinwood and yavarani or rana, except locally, only grow to a small size; halmilla is rare; and of ebony, since the destruction caused by the traders, there is comparatively little left. The palé in some forests form one-fifteenth of the standing timber, with a few satinwood and yavarani. The soil is very sandy and poor. The trees are stunted and short-stemmed, with large spreading crowns, and thorny forms of undergrowth predominate. Locally the growth is fair, and generally the finest trees are in the forests about twelve to fourteen miles from the seashore, on either coast.

120. *Separate regions of growth distinguishable.*—The Province may be divided into (*a*) the Peninsula of Jaffna and the Islands, including Mannár; (*b*) a belt round the coast covered only with coast scrub; (*c*) a strip down the centre of the Province covered with the characteristic arid zone forest alluded to in paragraph 98; and (*d*) a strip intermediate between *b* and *c*.

121. *Jaffna and the Islands.*—The Peninsula itself and the Islands of Delft, Middleburg, &c., have no forests. Most of the area is under cultivation, or covered with groves of palmyra trees, which is as common as in Tinnevelly. Such few areas as were at one time covered with forest

have now been taken up for cocoanut plantations, or are covered only with scrub of Eugenias, Melia indica (*Nim*), Butea frondosa, &c. The Island of Mannár, which is nearly all private property, is covered with palmyras, and with a thorny scrub of Acacia planifrons, a small tree of which the wood is largely taken to India for firewood. Adansonia digitata is naturalized here.

122. *Coast Belt.—Central Region.*—The strip down the centre of the Province, from Viláṇkulam to within twenty miles of Elephant Pass, appears to be high lying. The soil is very sandy and poor, and whilst in some ways different from the coast belt, it will be better to consider the two together when they have both so much in common with the Hambantota District.

The natural conditions of soil, rainfall, &c., are similar, and we have stunted palé with Elæodendron glaucum, Hemicyclia sepiaria, Salvadora persica, and a mixed undergrowth of Memecylon (3 species), Carissa diffusa, Dodonea viscosa, Phyllanthus Emblica, Zizyphus (3 or 4 species). The palé only grows into a small tree, and frequently becomes a low spreading bush. The appearance of the scrub, with the tops of the trees and shrubs looking so wind-blown and flattened out, is peculiar. Cassia auriculata and Hibiscus eriocarpus are very common. Large areas are covered only with a few palé and veré, with an impenetrable undergrowth of nillu (Stenosiphonium), Carissa diffusa, and Zizyphus rugosa, which allows nothing else to grow. Other common trees are Dichrostachys cinerea, Cassia marginata, Bauhinia racemosa, &c., either bordering on, or in clumps on the large open plains or depressions already alluded to, which are confined however to the coast regions in both the Northern Province and the Hambantota District. In the latter especially may the vegetation be said to be typical of the arid zone. Near the seashore these open spaces are only grassed over; further back we get them covered with Acacia eburnea, Cassia auriculata, Dichrostachys cinerea, Zizyphus rugosa, Z. Œnoplia, Z. nummularia, &c., &c., whilst a narrow strip along the river banks is covered with trees. The width of this strip is often only 150 feet, and we step from fair-sized forest of halmilla, Diospyros ovalifolia, Terminalia glabra, &c., into a country more barren than the Multan Rakhs in the Punjab, where the rainfall is five inches or less.

123. *Intermediate Region.*—The forest between the coast belt and the central low forest region resembles the vegetation of the North-Central Province, but all the trees except palé are generally smaller. In parts the growth is good, some fine ebony and yavarani having been cut at different times, but satinwood gets on less well. At Pallevaráyankaddu on the west coast, and Kumlamoni on the east coast, this belt of forest comes close to the seashore, and is of considerable breadth. In other places, again, it is scarcely traceable. The description given of the North-Central Province forest vegetation applies to this.

124. *Large export from the Northern Province.*—From the figures and statements appearing further on, it will be seen that the timber fellings have always been considerable in the Northern Province. For the last 40 or 50 years, taking advantage of easy regulations and light royalties, the export to the seaboard has been very large. The royalties levied on behalf of the Crown were so light that they formed a small fraction only in the cost of working and transport, especially when the facilities for theft were so great. When reproduction has been so defective, and consumption so large, it is only to be expected that a very large portion of the forests should be without mature or saleable timber.

125. *Facilities for transport.*—Circumstances generally in Ceylon are very favourable for timber transport, especially in the dry zone. The streams are too small, the woods too heavy for floating; but the Island is here not more than 120 miles across, and the best forest often grows close to the seashore. The country is very level, the streams are dry for nine months in the year, and a rough but serviceable cart-track can be made by cutting away the jungle. Cart hire is cheap, and the expert Malay and Tamil timber cutters have always been accustomed to heavy timber work. The forests, too, are unusually healthy nearly all the year round—no unimportant consideration.

126. *Northern Province.—Ebony and Satinwood cleared out.*—In the Northern Province, the most distant forests being only 40 miles from the sea, we find that nearly all the mature ebony and satinwood has been cleared out. With cheap labour and transport procurable from Jaffna, the traders were able to cart ebony from the most distant forests, and in some cases to cut satinwood 30 to 40 miles inland. The few forests between Vavúniyan-Viláṇkulam and Mannár from which ebony was not cleared have now been worked by the Forester, who also recommended in 1876 that no timber but ebony should be cut for some years, so great had been the destruction by traders. In the Mullaittívu District most of the forests have been well cleared of mature timber of all kinds, only such palé as were too large in girth to remove being left.

127. *Reproduction.*—The reproduction, although in parts very fair, as for instance to the east of Viláṇkulam, is generally very indifferent, especially in the fine forests of the Mullaittívu District. On the whole it is better perhaps than in the forests further south, where the heavier rainfall gives greater encouragement to the growth of the commoner species.

128. *Future fellings.*—Of ebony and satinwood very little mature timber is left; palé and yavarani appear to be the only trees of which there should be any regular fellings for some time. But there is much hope that, at least from some parts of the Province, the commoner woods may in future be utilized, and that in connection with reproductive measures it may be possible to get firewood exported to India. A few satinwood and possibly ebony may in due course be cut, but for the next fifty years all efforts should be directed to their conservation.

The North-Central Province.

129. *Vegetation.*—Here the growth is much more vigorous: in the southern parts of the Province ebony and satinwood grow to great perfection; yavarani, and in parts halmilla and milla, which here become more common, grow to a fair size. Palé is common in most of the

forests. These saleable timber trees cannot, however, in any sense be said to form *forests*. Over a small selected area they may perhaps form one-fifteenth or even one-tenth of the standing timber, but never is this the case over very large areas. The principal trees are Pterospermum suberifolium, Nephelium Longana, Sapindus emarginatus, Glenieia zeylanica (Kuma). These four form probably one-fourth to one-half of the standing timber in many forests. Diospyros ovalifolia, D. crumenata and D. Embryopteris are common everywhere, whilst the chief tree, although scarcely worthy of the name, is undoubtedly véré (Hemicyclia sepiaria). Going through the forest we may have satinwood and ebony trees for a time, then perhaps none for some distance, but véré is always to be seen, except perhaps on some of the stony Konduruwa hills, or on the lowlands in Tamankaḍuwa. Of other trees here may be named Ulmus integrifolia, the finest tree in the northern dry zone forests; Pongamia glabra, Croton aromaticus, Chickrassia tabularis, Schleichera trijuga, Strychnos Nux-vomica, Alstonia scholaris, Stephegyne parvifolia, Adina cordifolia. On the open patches of low-lying ground, often the beds of old tanks, the commonest trees are Feronia Elephantum, Cassia marginata, C. Fistula, Eugenia Jambolana, Acacia leucophlæa, Polyalthia longifolia, Strychnos Nux-vomica (a characteristic tank tree).

130. *Equal distribution of the Forest.*—Almost the whole of the North-Central Province may be said to be covered with forest, or with chena scrub. Except in Tamankaḍuwa, the forest is equally distributed, and of no part, as in the Northern Province, can it be said that there is no good timber forest. On either side of the road from Dambulla to Viḷāṅkuḷam there is more scrub than elsewhere, but this is probably the result of some difference of soil or of climate as doubtless exists down the centre of the Northern Province, of which this is but a continuation, and which has there produced the low forest already described; or it may be due to this part having been more frequently cleared for cultivation in past ages, owing to its being near the important Buddhist centres of Anurádhapura, Mihintalé and Dambulla.

131. *Different classes of Forest.*—Speaking generally, the forests may be said to be very patchy; on the hills only are they at all regular. Going along the village paths, (which offered the only means I had for judging of the forest distribution), the path for half a mile passes through a fairly tall forest with satinwood, ebony and milla; then for one mile it goes through a low forest in which Hemicyclia sepiaria is the principal tree, with perhaps *only a few* of the other unsaleable woods; then we pass through chenas of various ages, and finally reach the paddy land and the village. The same alternations occur everywhere. The villages are equally scattered over the whole Province, except on a broad strip on either side of the Trincomalee road, and also in portions of the Wilachi Kóralé. Each village has its tank, its paddy land, its chena surrounded by forests, and each becomes a centre round which the destruction of forest gradually progresses.

132. *Suggested cause of the varying nature of the Forest.*—If this process has been going on for several centuries, and went on when this part of the country was thickly inhabited, the patchy nature of the forest is fully explained. *The best satinwood, ebony and halmilla forest*, such as we find on the hills, has probably not been cleared for many centuries, if ever; that where there are *satinwood mixed with véré* has been cleared more recently; whilst that *without any satinwood and only the inferior woods, véré especially*, may have been cleared in the last 200 to 300 years. Many other causes have of course been at work, and although there are many arguments against this explanation, these three distinct gradations undoubtedly exist, which cannot be traced to differences of soil and climate. As an instance confirming this suggested explanation, I may mention the forests near Yapahu in the North-Western Province.

133. *Present area of Forest with marketable Timber.*—So great are the variations in growth, and so little do the present officers know of the distribution of the forests or of their contents, that it is most difficult to generalise from the little I was able to see here. As has been mentioned more than once, there are still large areas unexplored. The statements of the Foresters having so often proved incorrect when I had opportunities for investigating, I must respectfully decline to put the least reliance on them. I was shown as the best forests those that appeared to me worked out, and curiously the felling contractors also subsequently made that the reason for declining to cut there. The argument in favour of there being forests and much mature timber left in the unexplored parts is but a negative one. As on the large areas still unexplored, we know that the soil and climate, &c., are the same as in those parts from which fine timber has been cut, it appears probable that the resources of the North-Central Province forests are large.

134. *These forests worked less by the traders.*—Difficulties of transport have to a great extent protected the forests. The nearest point is twenty-four miles or so from the seaboard, and before the traders had exhausted the intervening stretch of country the license system was stopped; little timber was therefore cut, and as time has not been given under Government agency to do more than clear the forests abutting on the main roads, it is probable that a large amount of mature timber will be found away from the roads, especially in those parts where there are fewer villages.

135. *Reproduction.*—The reproduction in such of the forests as were worked by the traders, and in those cleared in the last few years, has been very bad. In the former the species cut have often in places entirely disappeared; where the Forester has been working there appear to be no seedlings of the better kinds.

136. *Forests of Tamankaḍuwa.*—Tamankaḍuwa, in the valley of the Mahavili-gaṅga, has always been reported to have very fine forests. This is, however, quite a mistake. The greater part of the valley is under water for two or three months in the year, and forest consequently only grows on the well-drained alluvial soil deposits above the present water level, on either bank of the main stream. Inside this strip of forest, rarely more than half a mile broad and often less, there is low ground, frequently flooded by the back waters and side streams, in which the only trees are a few stunted palé, Bauhinia racemosa, and Feronia Elephantum; even Terminalia glabra refuses to grow on the water-logged soil; although if a little fresh alluvial soil be thrown up and

the soil becomes less sour, this tree springs up with Sarcocephalus cordatus (Vammi)—a very common tree in rich damp soil, and halmilla. When the water partially subsides, a dense growth of coarse grass springs up which attracts large herds of elephants. The area of this low-lying land probably occupies one-third to one-half of Tamankaduwa. On the high land far away from the river there are stunted forests of satinwood, véré, &c., but nothing of any great value until to the north, on the hills between Habaraná and Minery, we get good ebony and satinwood. The strip of forest along the river bank, consisting of rana, milla, halmilla and churapunné, is well grown, but with easy river transport for these light woods to Trincomalee, most of the larger timber has already been cleared out.

The North-Western Province.

137. *Puttalam District.*—In the Puttalam District and in the northern parts of the Kurunégala District, the forests are similar to that of the North-Central Province, except that in many the proportion of saleable timber is much higher, whilst the trees satinwood especially—grow bigger. In a few places there are remnants of forests of which one-fourth, or even half, must originally have consisted of ebony, satinwood, palé and rana. Tammana (Mischodon zeylanicus) is common here, and is one of the saleable timbers, as also vet-palé (Wrightia angustfolia), both growing into fine trees. The forests of the Puttalam District are perhaps the most desirable of any in the Island; the quantity of mature timber they hold appears to be large; a large part of the district is only thinly inhabited, and at present in the best timber regions there is not much chena; the forests go close down to the sea shore, and some with large quantities of good mature satinwood and palé, such as those in which the Forester is now felling, are but six miles or so from the beach.

138. *Reproduction better.*—But the very fair reproduction in some forests that has taken place since the fellings is even more satisfactory than the presence of a larger proportion of well-grown saleable timber. For both there is apparently no reason assignable, the soil of the best forests being very sandy and poor, whilst the trees are exposed to the full violence of the S.W. monsoon.

139. *Work of the Traders.*—That mature timber has been left so close to the beach is explained by the fact that the traders worked here but little. Labour and carts had to be brought from a distance, and this saved the forests that will now be so valuable. The traders appear never to have gone more than ten or twelve miles inland for ebony, or more than five miles for satinwood. Where they left off, the work was resumed on behalf of Government, and though we must gradually go further and further inland for timber, we can only surmise that inside there is good timber forest left. No steps have been taken to establish this fact, and until this is done the statement that there is a large quantity of timber left is a mere conjecture, based on the negative argument that there is no apparent reason for its absence.

140. *Coast Forest.*—The coast belt of the Northern Province comes as far south as the Mí-oya and Puttalam, and in places, as at Pomparippu, can be traced as far as ten miles inland, although here, as in other parts of the Island, there is a strip of forest three miles broad bordering the sea, whilst the belt of patchy stunted scrub is between the coast fringe and the main body of forest. North of Puttalam, no large quantity of mature timber can be looked for within eight to ten miles of the sea, but with this exception the forests are believed to be equally distributed over the rest of the district.

141. *The Kurunégala District.—Large extent of chenas.*—In the Kurunégala District much destruction has been caused by chenas. The only forests of any extent left are Pallakelli, which has very fine ebony and halmilla, and Dambua, not far from Yapahú. The latter consists of a curious mixture of véré, ebony, palé and yavarani. The ebony (about three trees to the acre) are the largest trees in the forest, the yavarani being all young. Pallakelli forest is on a range of hills bounding the North-Western Province, and between this and Kurunégala, a distance of twenty miles, all the forest has been cleared with the exception of a few rocky hills such as the Yakdessa range north of Kurunégala, up which, steep though they are, the clearings are gradually working their way, and in many cases have already reached the top. Anyone who may think this picture overdrawn and doubts the statement that, although there is no forest left, only an infinitesimal part of the country is occupied by permanent cultivation, should make a tour in the North-Western Province in the month of May just before the monsoon, taking every opportunity of ascending trigonometrical survey stations to get a bird's-eye view of the country.

142. *Past timber fellings.*—The traders cut very little in these forests until the Kandy railway was finished, but heavy fellings have been carried on since, both by them and by the Forester in the Pallakelli forest. North-east from Nikaweratiya towards the Mí-oya, and also north of Dambua Mukalána in the extreme north corner of the district, there is probably some timber, but systematic exploration is still wanting.

The Eastern Province.

143. The forests of the Eastern Province may be divided into two distinct heads: (*a*) those of the Trincomalee District with some of the coast forests north of Batticaloa; and (*b*) the rest of the forests in the Batticaloa District.

144. (*a*) *The Trincomalee District.*—Here palé is now the principal timber tree. Satinwood, halmilla and ebony were formerly common, but all the mature timber has been cleared out, and, except of halmilla, the reproduction has been poor. The palé are particularly fine, and in some forests form about one-tenth of the standing timber. The forests do not differ essentially from those of the North-Central Province, except that palé, although not confined to the coast

districts, is commoner here than inland. The principal trees are Hemicyclia sepiaria, Pterospermum suberifolium, Nephelium Longana, &c.

145. (*b*) *The Batticaloa District.*—In the Batticaloa District, especially a little distance inland, the forest growth is far finer, owing to a somewhat heavier rainfall and to the south-west winds being less continuous. On the coast, the Kottiar pattu has no good timber, but in the Kóralai pattu good forest begins, and on either side of Vendeloos Bay it goes down to the seashore. Elsewhere we only get it some distance inland, whilst often we find it on a strip one or two miles broad along the seashore, separated from the main body of the forest by low-lying stretches of sand, either bare or with clumps of palé growing into round flat bushes not more than five feet high, with Cassia auriculata, Eugenia Jambolana, &c. A little further from the sea we get bushes of Memecylon edule and Hibiscus criocarpus. In the coast forests the following trees are common :—Polyalthia longifolia, Magnifera zeylanica, Calophyllum Burmanni, Eugenia zeylanica (with white edible fruit), E. Jambolana, Vitex leucoxylon, Mimusops indica, &c. : all with the exception of the first are most characteristic of the coast vegetation. Further inland the forest grows much taller than in the parts of the dry zone already noticed—(the satinwood in some parts of the North-Western Province are perhaps almost as tall), its general appearance is quite different, and one notices more vigorous growth. The trees have a healthy appearance, dominant trees are more common, and one feels, having been through the rest of the dry zone forests, that a real "forest" of fair-sized trees is at last reached.

146. *Absence of Hemicyclia sepiaria.*—In many forests there is little of Hemicyclia sepiaria. Ebony, yavarani, satinwood and halmilla form, with trees such as Pterospermum suberifolium, Nephelium Longana, and Polyalthia coffeoides, a very fair class of forest. Halmilla, elsewhere generally standing singly, is found to compose a fairly complete forest 80 to 90 feet high, with the other woods forming a complete underwood, the crowns of the lower tier being 20 to 30 feet below those of the halmilla.

147. *Gregarious Forests.*—Polyalthia coffeoides is common in the damper forests ; near Tampitia it may be seen forming an almost pure forest with Tumpalé (Vatica sp.). Other trees come in here which are rare further north, such as Calophyllum tomentosum, C. elatum *(Bedd.)*, Dialium ovoideum, Antiaris toxicaria, Chickrassia tabularis, Walsura piscidia, and Albizzia odoratissima, all of which grow to a large size. In some forests Diospyros oocarpa is a very common and most deceptive tree, the appearance of the stem being very similar to that of the ebony ; it has no black heartwood.

148. *Distribution of the best Forests.*—The best forests are in the Pallé Paláta, in the Friar's Hood country, and in the catchment areas of Pulukanáwa, Devilané, and the other tanks.

149. *Different vegetation south of Ambáre.*—Soon after leaving Ambáre and Irakkamám, the last of the series of irrigation works, the character of the forest alters considerably. As we approach the Hambantota District the climate becomes much drier, and the forest is once more similar to that north of the Mahaveli-gaṇga ; véré is more common, and we get the same mixture as in the North-Central Province, *i.e.*, satinwood, ebony, rana and halmilla as saleable timbers, with véré, vedekanari, taintuki (Dimorphocalyx glabella), kokatiya, &c. Pterospermum suberifolium and Nephelium Longana are less common. The distinctive features of these forests are that the unsaleable woods do not stand so close, and consequently the reproduction of satinwood and halmilla is better, although not good. The large quantity of halmilla which at one time grew here is remarkable. There is still a good deal of timber left, but little compared with the large quantity shipped from Arrogam Bay in former years. A good deal of the soil is low-lying, and this is what suits the halmilla so well ; an occasional flood, which runs off rapidly, leaving behind some good soil.

150. *Reproduction.— Satinwood.*—The reproduction of satinwood, &c., in the Batticaloa District, although it cannot be called satisfactory, compares favourably with that in other parts of the dry zone. In some forests, such as those of Ponani, twenty miles north-west of Batticaloa, not far from the Baron's Cap, and also in the forests of Lahugalla (Lagúgal) near Arrogam Bay, there are large numbers of satinwood seedlings, three to twelve inches high, which have everywhere the same stunted appearance and want of vigour, although in some parts, especially near Hulanunga, sixteen miles from Kurunari, there are a fair number of satinwood poles, showing that some of the seedlings are able to force their way up.

151. *Halmilla.*—The state of the halmilla in the forests south of Ambáre are also unsatisfactory ; the age classes are very unequal. We have the mature trees—the remains of the original forest first cut into fifty years ago—which are now past their prime and are dying off, especially in the Mandana forests, whence a good deal of dead timber is now being cleared. To take the place of these we only have seedlings, saplings, and a few poles, which, if they succeed in forcing their way up, will take 30 or 40 years at least to mature ; a large proportion, as in the case of the satinwood, must infallibly die down, unless some means are taken to clear out the commoner woods.

152. *Areas cleared by Traders.—Trincomalee District.*—Along the coast the quantity of timber removed by traders has been large, especially in the Trincomalee District, where the sole occupation of several Malay villages for the last 30 years has been timber felling. Beginning near the coast line, year by year they had to go further back for timber. The principal timbers cut were satinwood, palé, ebony, and halmilla. To the north, starting from Lake Kokelai, we find that they worked twenty to twenty-five miles inland up to Padaviya tank. Along the southern edge of this timber district they went fifteen miles inland from Tamblegam Bay. The country between these two points has been well cleared of mature ebony, halmilla, and satinwood, and although with the exception of a strip five miles wide along the coast it is still covered with forest, the only mature timber in any quantity is palé. The other timber left is very indifferent—only the rejections of the traders.

153. *Batticaloa District.*—In the Batticaloa District, satinwood and halmilla were the principal timbers worked out by the traders. Round convenient shipping places, such as Batticaloa Lake and Arrogam Bay, they denuded the forests of all mature timber within a radius of five or ten miles. Cultivation has followed—either permanent paddy cultivation or chena—and except in the country south of the new irrigation tanks, there are few good forests left within ten miles of the sea.

154. *Distribution of forests with mature timber.*—Westwards from the limits of the trader's work and of cultivation, we have generally a good deal of mature timber as far as the Central Province boundary. South of the Badulla road for some distance, till we get into the Friar's Hood country, there is more chena than forest. At Puluganáwa tank we get into good mature forest again, and from here, all westward of a line drawn to Devilane and Ambáre tanks, is covered with more or less mature timber. The country is rather broken, and on the hills we get ebony, tombukata and churapunne, with satinwood and halmilla in the better soil of the low ground. Work is now being carried on here, and the chena cultivator is also fast forcing his way in.

155. *The country south of Ambaré.*—South of Ambaré the boundary shown on Fraser's map is wrong, as it should run to False Hood and Westminster Abbey, and thence south-east to the Kumbukan Aar. The large Maha Vedderata, of which the greater part is in the Eastern Province, has a good deal of mature timber. There is a good deal of chena in the centre of this division, connecting the villages of Panelagama, Komberahella, &c., but the country between these and the sea is still covered with good forest. Most of the halmilla used in Colombo came from these parts, and there is still fine timber left in the forests more remote from the seaboard, as far south as the Kumbukan Aar.

156. *Hambantota District, Southern Province.*—Bordering the Eastern Province to the south, we have the Hambantota District. In the easterly parts the forest growth is very poor; the rivers are bordered with narrow strips, often not more than 150 yards wide, of fair sized halmilla and the commoner woods, but the greater part of the country is covered with the low forest of palé and véré, or with thorny scrub. The trees are all small and of no value. Further west in this district, there is only chena scrub or low forest.

157. *Central Province.*—In those portions of the Badulla District in the Central Province which lie in the dry zone, there appear to be very few forests, and, as I have remarked elsewhere, the whole country is one vast chena. This district has become the home of chena cultivators, who, displeased with the stringent regulation enforced in the Eastern and other neighbouring Provinces, had merely to cross the border to find an asylum, where everything was made easy for them. Forests could be cleared as long as the supply lasted, and they were not restricted as in the Eastern Province to the clearing of ten-year-old chena scrub. Although I enquired from natives and all others who were likely to know anything about the forests, authentic information as to the existence of any was not forthcoming. My route took me through nothing but endless chena scrub, the only forest trees left being on rocky knolls, or in the form of a narrow fringe along the streams and the principal "tavalam" tracks. This fringe was said by the headmen to have been left standing by order of the district officer; so it would appear that these clearings are of quite recent date. Headmen and others will of course say from a distance that there is forest in such and such places, which on closer examination are found to have been repeatedly cleared; indeed, the class of information supplied by the headmen and by some of the "Foresters"—(really road officers)—may be judged of by the report sent from the Badulla District.

THE MOIST ZONE.

158. *Extent.*—This comprises the south-west corner of the Island and the central hill region, and includes the Western Province; the Galle and Mátara District, Southern Province; two-thirds of the Kurunégala District; and the whole of the Central Province, except one-half (approximately) of the Mátalé and Badulla Districts.* The rainfall here is from 60 to 200 inches; the showers are frequent; and the atmosphere is warm and moist. Except on the eastern hill slopes of Uva, there is no well-defined dry season, and except to that district the south-west monsoon brings, in the place of the hot wind of the dry zone, a mild damp breeze with heavy rain. In elevation the moist zone comprises from sea level up to over 8,000 feet. The forests assume quite a different character; we have luxuriant tropical growth, the trees growing rapidly to a large size with a dense undergrowth of shrubs, herbaceous species, rattans, &c; their wood is generally inferior, in point of durability, to the slow grown timbers in the dry zone.

159. *Division of the Vegetation into Zones.*†—The vegetation may be conveniently divided into several zones of altitude, although there are no exact lines of demarcation between them, such as may be traced between the moist and the dry zone.

The following are the divisions:—

ZONE 1.—*The Low Country*...	Elevation, from sea level up to 2,500 feet. Rainfall, 60 to 100 inches.
ZONE 2.—*The Lower Hills* ...	Elevation, 2,500 to 5,000 feet. Rainfall, over 100 inches.
ZONE 3.—*The Upper Hills* ...	Elevation, over 5,000 feet. Rainfall, 80 to 100 inches.

* Generally it may be said to comprise the so-called Siphalese country. The parts of the latter, such as the Puttalam District or the North-Central Province, which are included in the dry zone, have in the one case no very marked predominance of Siphalese, or, as in the second case, they are very thinly populated throughout, whilst in one district (Tamankaduwa) the Siphalese are much in the minority.

† I am indebted to Dr. Trimen for the complete sketch of the vegetation appearing in this and the succeeding eight paragraphs, which I substituted for my own, and to Mr. William Ferguson for the vernacular names.

In addition to these may be added a zone, including the regions of the heaviest rainfall—100 to 200 inches,—with a special endemic flora;—elevation up to 7,000 feet.

ZONE 1.—THE LOW COUNTRY.

160. *The Forest trees.*—This possesses a very rich vegetation of a purely equatorial character. Of trees, the following selection is fairly characteristic:—

Dillenia indica (Hondapará)
* ——— retusa (Godapara)
Garcinia spicata (Kokati)
——— echinocarpa (Madol)
* Calophyllum Inophyllum (Teldomba)
* Mesua ferrea (Ná)
* Doona zeylanica (Doon)
* Vateria acuminata (Hal)
* Vatica Roxburghiana (Mendora)
* Dipterocarpus zeylanicus (Hora)
Bombax malabaricum (Imbul)
Eriodendron anfractuosum (Pulun-imbul)
Canarium zeylanicum (Kekuna)
——— brunneum (Mahabullúmoragaha)
* Filicium decipiens (Pehimbia)
* Melia dubia (Lunimidella)
Walsura Piscidia (Kirikong)
* Schleichera trijuga (Kong)
* Mangifera zeylanica (Etamba)
Dalbergia frondosa
Pterocarpus Marsupium (Malugaha)
* Pericopsis Mooniana (Nedun)
* Cassia siamea (Aramana or Wá)
Adenanthera bicolor (Masmorú)
Pygeum zeylanicum
* Carallia integerrima (Dawata)
Terminalia glabra (Arjuna), (Kumbuk)
——— belerica (Bulú)
——— chebula (Aralú)
Eugenia Gardneri
Eugenia aquea (Waljambú)
——— micrantha, &c.
Barringtonia racemosa (Mudilla)
Lagerstrœmia Flos-Reginæ (Murutu)
* Homalium zeylanicum (Liang)
Canthium didymum (Porua-mara)
Morinda bracteata (Ahú)
Chrysophyllum Roxburghii (Lawalu)
Bassia neriifolia (Gan-mi)
* Alstonia scholaris (Rukuttana)
Holarrhena mitis (Kiriwalla)
Oroxylon indica (Totilla)
Vitex Negundo (Notchi)
* ——— altissima (Milla)
Cinnamomum zeylanicum (Kurundu)
Myristica Iria (Iria)
——— laurifolia (Malaboddu)
Litsæa tomentosa, &c., &c., (Dawal-kurundu)
Gyrinops Walla (Walla)
* Artocarpus nobilis (Del)
* ——— integrifolia (Kos) Jak [not native]
——— Lakoocha (Etaheraliya)
Ficus laccifera (Nuga)
——— infectoria (Kiripella)
——— indica (Tjiela, Miq), &c., (Ella Nuga)
Mallotus (several)
Macaranga tomentosa (Bukenda)
Croton lacciferum, &c., (Keppitia)
Briedelia retusa (Ketakela)
Cycas circinalis (Madu)

161. *Undergrowth, &c.*—There are also several species of Calamus and two species of Bambusa (*B. vulgaris* and *B. spinosa.*) The Kittul (*Caryota urens*) is common in most forests of the low hilly country. The talipot palm (*Corypha umbraculifera*) is characteristic of the western slopes of the hills at 1,000 to 2,500 feet altitude, and is specially noticeable on the Kandy railway incline.

The smaller shrubs and undergrowth comprise such species as numerous Anonaceæ, Allophylus Cobbe, Erythrospermum phytolaccoides, Hydnocarpus venenata (Makulú), Osbeckia aspera, Memecylon (several), Ixora coccinea (Ratmal), Wrightia zeylanica (Walidda), Premna tomentosa (Buseru), Blachia umbellata, Phyllanthus (several), and an abundant bamboo, Ochlandra (Beesha), stridula (Batali). Other interesting species are: Nepenthes distillatoria (Bandarawel), Exacum zeylanicum (Kinihiriya), Knoxia zeylanica, Elettaria Cardamomum (Ensal), Sanseviera zeylanica (Niyada), Gloriosa superba (Niyagala), Flagellaria Susum, Raphidophora (two species), Pothosscandens (Potha), &c. Many plants in these lists are peculiar to Ceylon, or at least do not occur in the Indian Peninsula.

ZONE 2.—THE LOWER HILLS.

162. *The Lower Hills.*—In this zone, which may be reckoned to extend roughly from 2,500 to 5,000 feet, the great clearings for coffee estates have mainly been made, and the native vegetation has proportionately suffered. It was formerly the orchid district of Ceylon, but several species once found are now probably lost, whilst many others have become very scarce.

163. *Tree vegetation.*—The following trees may be given as characterizing the lower hills, though many are by no means confined to them:—

* Calophyllum tomentosum (Kina)
* Doona Gardneri (Doon)
* Vateria Gardneri
Cullenia excelsa (Katubodu)
Aglaia apiocarpa
Mastixia arborea (Diatalia)
Pithecolobium subcoriaceum
* Carallia calycina (Ubberia)
Terminalia parviflora (Hampalanda)
Eugenia Jambolana (Mádan)
* ——— operculata (Batadomba)
——— Neesiana, &c.
Careya arborea (Kahata)
Isonandra Wightiana
* Mimusops Elengi (Munamal)
Diospyros sylvatica
——— Toposia
Olea glandulifera
Fagræa obovata
——— Gardneri
Chloranthus brachystachys
Machilus macrantha
Helicia zeylanica
Ficus Wightiana (Kalaha)
——— dasyphylla, &c. (Kirinuga)
Celtis cinnamomea
Scleropyron Wallichiana
Ostodes zeylanicus (Wal Kekuna)

* These are the principal timber trees. The native names given are Sinhalese.

164. *Undergrowth, &c.*—The undergrowth is largely composed of nillu (Strobilanthes, of which some seven or eight species are found at these elevations) and species of Amomum and Zinziber; there are also many Balsams (Impatiens), Gesneraceæ, parasitic Christisonias, &c. The magnificent climbing epiphyte, Kendrickia Walkeri, formerly common, is also an ornament of the ew remaining patches of forest in this region.

ZONE 3.—THE UPPER HILLS.

165. *Forest Trees.*—At about 5,000 feet the mountain flora proper begins; our altitudes, however, are nowhere sufficient for the growth of anything like an Alpine vegetation. The trees are, with few exceptions, low, and are often marked by their small thick coriaceous evergreen leaves. The following may be mentioned as characteristic species:—

Michelia nilagirica (Sapu)	Eugenia rotundifolia
Calophyllum Walkeri	——— sclerophylla
Gordonia (3 species)	——— mabæoides, &c.
Elæocarpus obovatus, &c. (Galweralu)	Rhododendrom arboreum (Maharatmal)
Ilex (2 species)	Symplocos obtusa
Meliosma pungens	—— læta, &c.
Semecarpus coriacea	Olea Gardneri
Pygeum Wightianum	Cinnamomum ovalifolium
Photinia Notoniana	Actinodaphne (4 species)
Sarcococca pruniformis	Litsæa (5 species)
Eugenia calophylla	

166. *Undergrowth, &c.*—A very handsome tree-fern, Alsophila crinita, and six species of small bamboos are also noticeable.

In these mountains, however, it is rather the herbaceous and shrubby plants that attract attention, many being members of European genera. The others are generally members of genera found in the mountains of Southern India. In most cases the species are distinct and usually endemic. As examples may be noted—of the first-class, Ranunculus (2), Viola (2), Berberis, Geranium, Rubus (2 or 3), Alchemilla, Agrimonia, Heracleum, Galium, Dipsacus, Campanula (2), Gentiana, Calamintha, Plantago, Juncus (2), &c.; and of the second, Impatiens (about 12), Osbeckia (3 or 4), Sonerila (6), Hedyotis (12), Anaphalis (7), Lobelia, Exacum (2), Strobilanthes (9 or 10), &c.

Grasses and sedges are numerous, as well as orchids, both terrestrial and epiphytic, and ferns.

There are no native species of Cupuliferæ or Coniferæ in Ceylon.

DISTRICT WITH SPECIAL ENDEMIC FLORA.

167. *Limits. The region receiving the heaviest rainfall.*—A tract of country, pretty closely corresponding with that which receives the heaviest rainfall (100 to 200 inches), possesses, in addition to the vegetation indicated in the above paragraphs, an extremely interesting special flora, of which most of the species, and several of the genera, are strictly endemic, and show stronger affinities with Malaya than with Peninsular India. This region embraces a portion of Sabaragamuwa (including the town of Ratnapura), the Kukulu kóralé, and Hinidum Pattu, the Siṇha Rája forest, and the planting districts of Maskeliya, Ambagamuwa, and Dolosbágé, and though chiefly lying in the two lower zones above indicated, reaches well into the highest also, the Adam's Peak range being included in it.

168. *Characteristic vegetation.*—The most striking fact in the phyto-geography of this district, is the abundance of a specially Malayan family of trees—Dipterocarpeæ; no less than forty-seven species of this Order occur, of which all but two are peculiar to the district. There are also ten species of Semecarpus—all endemic; as many of Eugenia, four or five of Dichopsis, two or three of Bassia, and nine of Diospyros (including D. quæsita, the Calamander), all of which are confined to this district. Many peculiar genera or isolated species of Malayan ones also occur—such as Kayea, Schumacheria, Kokoona, Kurrimia, Campnospermum, Axinandra, Dichilanthe, Scyphostachys, Alyxia, Podadenia, Chœtocarpus, Palenga, &c.

A pretty herbaceous genus of Dilleniaceæ, Acrotrema, with ten or twelve species (all endemic), a dwarf palm, Areca concinna, two peculiar tree-ferns, Cyathea Hookeri and C. sinuata, a remarkable genus of Cyperaceæ, Pandanophyllum, and a few peculiar orchids are also characteristic of this, the most interesting portion (botanically speaking) of Ceylon.

PATANAS.

169. *Distribution.*—In the hill country at over 2,000 feet elevation the forest is not universal. It is chiefly on the western slopes; the more exposed and drier slopes, especially on the eastern side of the Island, are either bare of trees, being covered with tufty grass only, or else dotted with trees and bushes, very similar to some of the southern slopes in the Himalayas, at an elevation of 4,000 to 6,000 feet.

170. *Vegetation, &c.*—These grassy slopes or "patanas" are found up to the highest elevations, the tops and saddles of some of the main ridges being equally bare. The Horton and the Elk Plains, forming part of the central reserve on the summit of the main dividing range at over 6,000 feet elevation, are covered with patana and forest intermixed, in the proportion of one of the former to two of the latter. The tree patanas, called Talawa patanas, containing a few trees and shrubs are chiefly at the lower elevations, Careya arborea and Phyllanthus Emblica being almost exclusively found growing on them. At high elevations the chief patana tree is Rhododendron arboreum. The large patanas in the eastern part of the central tableland are generally bare, the protected ravines and hollows only having clumps of stunted trees, which

present a singular appearance with their regular outline and sloping green walls of foliage thrown out to resist the advance of the annual fires. The patana grasses are coarse and tufty, the commonest being mana grass (Andropogon Martini, of Thwaites), illuk (Imperata arundinacea). At an elevation of 5,000 feet and over, the patanas assume a different form ; the grasses are less coarse and form a close-grown springy turf.

171. *Forests in the upper hills similar to that of the dry zone.*—A similarity in growth between the forests at high elevations and those in the low country of the dry zone is noticeable. The trees grow close together, being short-stemmed and forming the same large umbrella-shaped crowns to resist the violent wind which tears across the ridges. They have the same small coriaceous leaves, and there is the same dense undergrowth, although here it consists of Impatiens and nillu (Strobilanthes). The latter grow to a height of over seven feet, and it is only after the seeding of those species, which flower only at intervals of six or seven years, that the forests are accessible.

172. *Extent of forest.*—As has already been mentioned, the area of the forests in this part of the Island has been much reduced by chena cultivation and by land sales. The forests best situated have been either chenaëd or sold, and those left are either inferior in quality, or remote from the rivers or roads. In the low country there are still considerable areas of forest left, but this is not saying much, when only one-third of the country is private property. The area of waste land is over two and a quarter million acres, and probably not more than 10 or 15 per cent. of this, if so much, is covered with forest. Such small areas as remain uncleared in the hill country are generally of little value for the timber supply, being inaccessible or remote. The large central mountain reserve has some timber in parts, but beyond supplying the small local requirements and railway fuel, it will never be of much value for the general timber supply of the Central Province.

173. *Secondary growth in the Moist Zone.—Foreign species.*—The present state of the greater part of the hill country, as modified by coffee planting and chena clearing, does not afford many opportunities of examining the forest vegetation. Up to 5,000 feet, nearly all the forests have been cleared for coffee estates, and owing to this and the destruction caused by chenas, there are probably not 5,000 acres of original forest left between 2,000 feet and 5,000 feet. The indigenous species have been supplanted to a great extent by foreign secondary growths, the principal being the lantana ; said to have been originally introduced by General Lowe in 1833 from the West Indies, this plant has spread over the whole of the moist zone, including the hill country up to 3,500 feet.* From sea level upwards, all the abandoned coffee estates and chenas are covered with a dense tangled growth of lantana, never over six to eight feet high, to the entire exclusion generally of other species. In the drier parts of the Island the spread of this pest has been less rapid, but one can watch its annual progress along the roads leading towards the eastern and northern coasts. After seeing the enormous lantana-covered areas and the dense matted growth covering the soil, it looks almost hopeless to think of tree-forest once more covering the land without artificial aid. Of other introduced species, the commonest are Mimosa pudica, Mirabilis jalapa, Passiflora fœtida, Ageratum conyzoides, the latter being the worst weed on coffee estates. Most of these and the many other introduced species, which have now spread so extensively, originally escaped from the Royal Botanical Gardens at Pérádeniya and Hakgala.

174. *Principal Timber Trees.*—The principal timber trees are included in the above lists. Of these, calamander† and nedun are the only cabinet woods ; jak and milla are durable for building—the former being the principal furniture wood of the Island ; of both the supply is limited, and the prices asked in Colombo are very high—such as Rs. 2 per cubic foot for jak‡ scantlings—owing to the only other good building woods—such as satin, palé, &c.,—having to be brought from the distant dry zone forests. The other woods, hora especially, are used for indoor work, for native houses, for coffee and plumbago casks. In the hill country the only woods used are doon for shingles and rafters, liangu, sapu, keena, domba.

175. *Work of the Traders.—Timber permits not taken out, but the forest itself bought by the timber dealers.*—The forests here have been little affected, except in the case of cabinet woods, by the depredations of the traders. In the forests of the dry zone the valuable trees are scattered, and a man to make money has to spread his operations over a large area. Here, the timber dealer preferred buying the best of forest land, with standing timber worth Rs. 300 to Rs. 400, at an upset price of Rs. 10 an acre with Rs. 2½ survey fees, to taking out a permit for a certain number of trees and paying a royalty on each stem. The disastrous effect of this policy not only in actual monetary loss, or in the neglect of this valuable and permanent source of revenue by Government, but in its depreciatory effect on the rest of the forest lands, and in the openings given for theft when protection was entrusted to local headmen, and when the law afforded assistance neither in checking forest destruction nor in controlling the transit of timber, may be better imagined than described.

176. *Cabinet woods.*—The cabinet woods, such as calamander and nedun—the former especially—have been almost exterminated from these forests by permit holders, and in a great measure by theft. At one time both were comparatively common, yet now in the restricted area in which calamander grows well—the Ratnapura District, the Pasdun Kóralé and the Hinidum Pattu—so few trees are left, that the position of each can be given by the older local inhabitants.

177. *Considerable demand for softer woods.*—Little durability though the softer wood possess, there is considerable demand for them in Colombo, and along the coast between

* Lantana has also overspread Australia and Tasmania. In the Nilgiris it goes up to an elevation of 5,000 to 6,000 feet, but in Ceylon 3,500 feet is the extreme limit.

† Known in the timber trade as Coromandel wood.

‡ Jak timber comes now almost entirely from private land.

Negombo and Mátara, and large fortunes have been made by purchasing blocks of forest land, and utilising the timber for cask-making and other purposes, for which the hard woods are too expensive or too hard to work. There is an entire absence in Ceylon of light durable timbers, such as teak, and consequently, hora, mango, and other inferior woods find more favour than they merit.

178. *Teak.*—This tree may now be considered naturalized in this part of the Island. Originally introduced by Van Rhede, towards the end of the seventeenth century, numerous plantations were made under the Dutch Government, and being specially protected by most wise provisions, it spread over the greater part of the coast districts. Under British rule the tree no longer enjoys special protection; most of the original plantations have been sold or the timber cut, yet it still continues to spread, notwithstanding its numerous enemies. Of teak timber there can be no talk, when even in Government plantations the trees are lopped, and on private land the smallest poles are cut. But the growth is good even on the poorest soils, in situations not too much exposed to the wind, and the further cultivation of the tree merits early attention. The imports of teak into the Colony are considerable; it is employed for the flooring and beams of all large buildings, for which there is no suitable Ceylon timber.

CHAPTER III.

THE SALE AND EXPORT OF FOREST PRODUCE.

179. *Timber.—Local consumption small.*—In considering the forest question of Ceylon, it is necessary to enter at greater length into the disposal of the produce than in the case of another country—say Madras, or any other part of India—where the demand for forest products being chiefly local, increased consumption follows the reduction in price caused by an increased supply. Ceylon is in a peculiar position with regard to the sale of its forest products. The area of forest, or of waste land more or less covered with trees, is immense, whilst the population is scanty in comparison. With regard to its timber—*i.e.*, the timber of good kinds—the consumption in the Colony is exceedingly small. A very large proportion of the population is rural, and content with timber of the commoner kinds. Only in Colombo, Galle, and Kandy may there be said to be any consumption of the better woods by the population generally. Here, too, the timber from Crown forests has to compete with wood brought from private land (originally bought from the Crown), which is far more favourably situated as regards the market, and with Burmah teak.

180. *Inferior Timber and Firewood.*—From inferior timber (posts, jungle sticks, fence sticks, &c.) and firewood, from which considerable forest revenue is often made, no returns come at present. Under the present law, theoretically, every one has the right to cut any quantity of the inferior woods from any Ceylon Crown forest; practically, of course, this right is of little value to a resident of Colombo. He would have to go a considerable distance inland before he got to any Crown land from which he could cut, without some private claim being put in. But away from the towns, each man goes into the nearest forest and supplies himself with firewood, fence sticks for his fields, &c., as he requires them. The towns, again, are supplied by persons who have bought forest land from Government, or the wood is brought from so-called private (often village) land by villagers, who also collect the unburnt wood and sticks off their chena clearings. Peeled cinnamon sticks are also largely sold in Colombo for firewood.

No sales of Grass and other Minor Forest Produce.—For minor forest products such as grass, &c., there is no demand, whilst in the case of orchilla weed, the bark of Acacia leucophlæa, tan-stuffs, palé fruit, gum, &c., the collection has hitherto been allowed without payment, or the royalty levied has been unimportant.

181. *Revenue from small timber and firewood not likely to be large.*—In future efforts must be made to develope these sources of revenue, but it is not likely, neglected as they have been in the past, that in any case the receipts will be important. The areas of good forest land held by natives are far too large and too advantageously situated, compared with those remaining to the Crown, for us to compete successfully in supplying Colombo, Galle, and other towns with firewood or with common jungle sticks, &c.

182. *Most of the forest produce taken by foreign countries.*—From the local trade in the better woods far more *revenue* may be looked for, but *no great increase in the consumption* can be expected. We shall depend, therefore, chiefly on foreign countries to take most of our saleable forest products, and although it is difficult to give the exact figures, there is reason for believing that already four-fifths of the timber cut in the forests of the dry zone is exported. This being the case, I need scarcely point out that the requirements of the markets to which our timber is shipped, must be watched as carefully as the London markets are studied by Ceylon merchants. The Government forest officers should understand that they are "expected to make the utmost of the estates entrusted to their charge, at the same time steadily improving their capital value and productiveness." For the first it is necessary that they should go into the market as merchants —not waiting for buyers to come to them, but, after finding out what possible demand exists, endeavouring to meet it. The forest officer must acquaint himself with all the "ins and outs" of the timber trade, and be prepared to meet the dealers on their own ground. He must no longer quietly accept what offers are made by a combination of natives, but, having fixed the limit below which local sales will not be made, he must keep to it, and, if necessary, ship his timber on Government account. Every endeavour must be made to open out new markets, and to create a demand for new forest products.

PRINCIPAL EXPORT TIMBERS.

183. The following are the principal timbers exported from Crown lands :—

Ebony.—China Market.—This wood is exported to China principally. In China, ebony is used for making chop-sticks and small pipes, the latter being the most important. The wood

is shipped from Ceylon to Shanghai, and thence most is taken to Ningpo, where the chop-sticks, &c., are manufactured. For this market logs of about 5 cwts. are preferred, but a deep jet-black colour is the great object. For pipes only the best black wood is taken, fair-sized straight logs being preferred, but for chop-sticks inferior wood is generally used. For the best black wood any price will be paid, and Ceylon has the monopoly of the market. The following estimate of the shipping and other charges on ebony sent to China has been kindly given me by Messrs. Whittall & Co. :—

		Rs.	cts.
Receiving, weighing, marking, and shipping, per ton	...	5	0
Freight to Shanghai (say) per ton ...	...	30	0
Marine Insurance, &c., on (say) Rs. 130 ...	...	1	30
Import duty, landing charges, &c., in China	...	12	50
Seller's commission, 5 per cent. (say) ...	...	7	0
	Total ... Rs.	55	80

To estimate the capacity of the China market, the average annual export for the five years, 1872–76, may be taken. This was about 500 tons, and as during that period prices were high, 400 to 500 tons can probably be yearly absorbed.

184. *Europe Market.*—In Europe, ebony has of late years been largely replaced by ebonised wood American birch being chiefly used—and there is now comparatively little demand. It would appear, however, that there are still considerable dealings when the market is not glutted, and a good quality of wood is brought forward. The European market, including the United States, although not so steady as the China one, is still considered able to absorb about 250 tons a year. Ceylon wood continues to fetch higher prices than that from Bombay or Mauritius. At the present moment the price may be taken at £9 to £10 a ton, whilst for Bombay and Mauritius wood the prices are £8 to £10* and £6 to £8 respectively. In the London market only logs of 8 to 10 cwts., straight grained and free from knots, fetch the highest prices.

185. *Bombay Market.*—In Bombay, the only Indian port to which I have been able to trace ebony exports, the prices are quoted at:—

Logs from 5in. to 10in. diameter, 4ft. to 9ft. length } 1 rupee per maund of 28 lbs.
Logs over 10in. diameter, 1 rupee 4 annas do.

These prices are equivalent to Rs. 80 and Rs. 100 per ton, and Bombay might be tried for disposing of limited quantities of the small timber, which spoils the China and London markets.

186. *Kalamander or Coromandel wood* is scarcely worth noticing, as none has reached the London market for years, and there is no prospect of future exports.

187. *Satinwood.*—Small quantities are taken to Europe, but the consumption there is very small, and the value of the wood for furniture is not known as much as it merits. The market is at present glutted with an oversupply, and the brokers, who were selling wood twelve to fifteen months ago at £20 a ton, cannot now get £6.† In Ceylon, satinwood is used for building, furniture, &c. Old satin trees are frequently hollow-hearted to a height of 8 to 10 feet from the ground, and these hollow logs fetch high prices as kottús or well-pipes—*i.e.*, as a casing for surface wells. In the Batticaloa District and in other parts of the Island no other wells are used. The greater part of the satinwood cut is exported to Madras, where it is used for furniture and general building purposes.

188. *Halmilla or Trincomalee wood.*—This wood is exported to Madras in log. It is used for boat-building—the Masula boats being built of it, and by the Madras coach-builders; some goes to the Trincomalee and Bombay Dockyards and to the Madras Gun Carriage Factory.

189. *Palé or Ironwood.*‡—Nearly all the timber cut is taken to the Indian ports, whence it is carried for some distance inland. It is used for door posts, window frames, roofing, &c.

190. *Yavarani or Rana* is used in India for ordinary building work, and also for boat-building, as it resists the attacks of the teredo.

191. *Milla—Lunumidella—Poon-wood.*—Small quantities of milla are taken to India, and a good deal of lunumidella (Melia dubia). The latter is used for the out-rigger floats of Ceylon canoes, and for catamarams in Madras. The wood is very light and fairly durable.

From the eastern coast where land has been sold for cultivation, a good deal of wood is shipped to India; it consists chiefly of small churapunné posts (Calophyllum Burmanni.) Of Calophyllum tomentosum and C. elatum (Poon wood) there are said to have been exports not long ago, spars being taken as far as Calcutta and Bombay, but since the number of sailing vessels has diminished, there has been no demand. When spars are now required by ships at Colombo or Galle, liangu or doon is supplied, or Norway pine.

FOREST PRODUCE OTHER THAN TIMBER.

192. The exports of other forest produce are unimportant. That of firewood from Crown land was stopped in 1864. Small quantities of tanning bark, (entirely mangrove, I believe, coming from different parts of the coast), are exported to India, but the only other exports of importance are orchilla weed and punai nuts. The latter are the fruit of Calophyllum Inophyllum or of

* Bombay ebony comes from Diospyros Melanoxylon; Mauritius ebony from Diospyros tessellaria.

† It is difficult to reconcile the Customs figures with this statement, when they show that only 270 logs have been sent to Europe in the last three years.

‡ Mimusops indica. There are no exports of Messua ferrea, the ironwood of the moist zone.

others of the same genus, shipped to India for the sake of their oil, which is said to form 80 per cent. of their weight. Orchilla weed is a lichen (Roccella Montagnei), common on the trees in the stunted coast forests of the dry zone, and is used for making litmus paper, and for dyeing.

The dried fruit of the palé (Mimusops indica) is exported to India from the Northern Province. When the fruit ripens in the summer, almost the entire population (men, women, and children) of the islands in Palk's Straits (Delft, The Two Brothers, &c.) migrate to the palé forests of the Northern Province. Here they live for a couple of months on the small sweet yellow fruit, and also dry large quantities for sale in Jaffna and the Indian ports. To collect the fruit the branches are lopped off, immense harm being done to the trees. The forests that suffer most are those within five miles of Palavarayankádu, where every tree is more or less rotten from the continuous lopping it undergoes. Wherever the palé grows it is lopped for the fruit, and although this wasteful means of collecting may be difficult to stop entirely, it should certainly be regulated in the more valuable coast forests. Small quantities of velam bark—the bark of velamaram (Acacia leucophlæa)—are also exported from the Northern Province to the Indian arrack distilleries.

193. *An increased out-turn only benefits the dealers.*—If all but the cabinet woods were consumed in the country, and if by putting more wood on the market or by reducing prices, consumption would be stimulated, one great difficulty of forest management in Ceylon would be removed. It will be seen in the next chapter, that the out-turn of the forests has only been increased to benefit a limited number of dealers.

194. *Effect of over-production.—Ebony.*—Taking the case of ebony, in the returns it will be seen that the average annual exports of the triennial period—1876–78—were 15,000 cwts; in the next period—1879–81—they rose to 35,000 cwts., the exports of one year (1881) being 52,000 cwts. The result of this was not to bring more revenue to the Colony, or to stimulate consumption by lowering the price of the manufactured article. The following extract from a letter of Messrs. Jardine, Matheson & Co. will show the effect it has had on the ebony trade in China:—

"While the imports of ebony were limited, a regular and satisfactory business was practicable, but during recent years imports have exceeded the consumption, and we have in consequence seen dull and depressed markets, accompanied by unremunerative rates. Imports during the past five years to this port are:—

	1877.	1878.	1879.	1880.	1881.
Piculs ...	10,300 ...	16,900 ...	17,684 ...	18,450 ...	—
Value of best black-wood—Taels ...	4·00 ...	3·75 ...	3·40 ...	3·00 ..	2·80 (Per picul of 133⅓ lbs.)
	(Rs. 12·00)...	(Rs. 11·25)...	(Rs. 10·20)...	(Rs. 9·00) ...	(Rs. 8·40)

To-day's (September 15) quotation is taels 2·60 (Rs. 7·80).

The effect of this policy in Ceylon is alluded to elsewhere, and although few sales have taken place in the last twelve months, ebony is still unsaleable, except to middlemen willing to buy at about the same price as satinwood, on the chance of a resale to shippers.

195. *Excessive supplies of Satinwood and other timbers.*—Over-supplies of other export woods have had the same effect on the Indian trade. In the Madras Presidency, where there is in many parts great scarcity of timber, the demand for timber is no doubt very large, but here, as in Colombo, the dealers stand between the producer and the consumer. A reduction in price only means larger profits to the dealer, for the latter, when he buys cheaply, is able to hold out for even higher prices than if he had, with borrowed capital, to realize quickly. Unless, therefore, by some means we can stimulate the demand, by giving the consumer the benefit of a reduction in prime cost, it is useless increasing the production.

196. *The foreign markets to be carefully watched.*—The markets abroad require to be very carefully watched, and the supplies regulated entirely in accordance with the demand. The men who ship timber to India are all more or less connected by caste and by business relations, and to resist their combinations the only way is to find out from India what demand exists. If they are not satisfied with a fair trade profit on the price paid here, means must be taken to secure a larger circle of buyers by shipments to the Indian ports.

197. *Cost of timber in Madras out of proportion to the price paid in Ceylon.*—No steps have as yet been taken to regulate prices in Ceylon by those current in Madras; consequently, I find that halmilla is being sold to the Madras Railway Company at 3 rupees 8 annas per cubic foot, and satinwood at 2 rupees 8 annas, which must have cost landed in Madras about 1 rupee 4 annas. This is but one solitary instance, but there is every reason for supposing that prices, out of all proportion to those we receive, are charged all along the coast.

198. *Correspondence with foreign Markets.—Supplies to be limited.*—In the ebony trade a combination of this sort is not likely to re-occur, if the policy of selling to native middlemen is finally abandoned. But here, too, the forest officer must adopt precisely the same means for securing reliable intelligence from foreign markets as the people with whom he is dealing, and no longer work blindfold with sharp men of business. There is no reason why we should try and part with all our timber as rapidly as possible; and unless fair prices are paid, it is better to hold back supplies. With ebony, of which the supply is so short, this should certainly be our policy. It is far better to sell 1,000 tons at Rs. 100 a ton than 2,000 tons at Rs. 50, if the difference in price is only pocketed by the dealer.

EXPORTS OF FOREST PRODUCE.

199. In *Appendix* A. will be found several statements, which I have prepared from the Customs returns for the last 20 years, regarding the exports of timber and other forest produce from Crown and from Private Land. The period of 20 years has been taken, in order to compare exports under the old license system from 1862 to 1871, with those of the last 10 years. As the

figures will furnish the only means at first of regulating the supplies of wood we put on the market, they have additional interest. To have detailed all would have been of little general interest, and I have consequently divided the figures into four periods of five years, only in the case of Statements IV. and VI. giving the value of the exports of each year separately. At the best the Customs returns of duty-free articles appear to be only approximate; the declared value often bears no proportion to the quantity exported or to its market value, whilst the Colonial returns do not agree, as regards the exports of palmyra timber and firewood, with those furnished for the Northern Province by the Government Agent.

EXPORTS OF FOREST PRODUCE FROM CROWN LAND.

200. *Statement* I. (A) gives the quantity and value of timber exported.

Statement I. (B) shows the exports of forest produce other than timber.

Statement II., showing the exports of timber from Ceylon during the last six years, has been compiled to explain the apparent anomaly noticed in examining the figures in Statement I. (A), and in order to show that the general fall in prices is attributable entirely to excessive production. During the three years 1879-1881, as compared with the preceding three years, the exports of ebony were more than double those of the preceding period. Of ironwood they are nearly four times as great. Halmilla only shows a decrease. These facts are sufficient to explain the present state of the timber market.

Statement III.—This is of interest, showing the proportion of ebony and satinwood going to China, Europe, &c.*

Any fall in the price of ebony in Europe is fully accounted for by the fact of a market, which at most absorbs about 250 tons a year, being loaded with 1,400 tons in one year—1880.

Statement IV. shows the annual value of forest produce exported from Crown Land during the last 20 years.

THE EXPORT OF TIMBER AND OTHER FOREST PRODUCTS CHIEFLY GROWN ON PRIVATE LAND.

201. No report on the forests of Ceylon would be complete without some account of the large exports of timber, dye-wood, &c., grown on private or on village land. The figures are suggestive of several ways of turning the large State forest properties to better account in future.

202. *Sapanwood (Cæsalpinia Sappan.)*—The growing importance of this dye-wood is shown by over 15,000 cwts. having been exported in 1881. From Ceylon, two-thirds of the exports are shipped to India and the rest to Europe.

203. *Kittool Fibre.*—The exports of this fibre have increased considerably in the last few years. The kittool (Caryota urens) is common in the low hills of the moist zone; it grows wild, and a large proportion of the fibre (made from the flower and leaf stalks) probably comes from trees growing in the Crown forests; no royalty is, however, levied.

204. *Palmyra Rafters and Reepers.*—It is to the large trade in palmyra timber to which I would chiefly direct attention. The palmyra palm (Borassus flabelliformis) grows only in the dry zone—the island of Mannár and the Jaffna peninsula being its principal home. It here attains a height of 60 feet with a girth of 2½ to 3 feet in the female, and 2½ feet in the male trees. It attains its full size at 70 or 80 years according to soil and climate. The trees are grown 6 to 10 feet apart, the latter distance being considered best for rapid growth. Where the palmyra grows the Tamil is said to come, and the numberless uses for each part of the tree explain why he sows it. There are said to be 801 uses for the tree, its leaves, sap, &c. Every part is fully utilized, and in the Jaffna peninsula it furnishes employment to a large number of people who draw the sap for toddy or for jaggery, and live for several months in the year on punatto and on kelingoes. Punatto is the dried pulp surrounding the ripe palmyra nut; kelingoes are the freshly germinated palmyra seedlings, which are boiled and ground into flour; the latter is mixed with jaggery and made into cakes.

205. *The Timber.*—The most valuable product of the tree is its timber, for which there is an unlimited demand in India. The heart of the tree is soft, but there is a broad shell of outside wood, consisting in the female tree of an almost solid mass of thick vascular bundles; in the male tree the vascular bundles are separated by more or less cellular tissue, and the wood is lighter and less valuable, whilst the out-turn is less. The female trees are taller, straighter, of greater and more equal girth throughout. About 16 male trees are said to be equal to 13 female, the value of a female tree being 2½ rupees against 1 rupee for a male.

206. *Cost of converting and shipping Palmyra Timber.*—The following estimate from the Northern Province of the cost of palmyra timber may be of interest:—

	No. of Trees.	Rate. Rs. cts.	Cost. Rs. cts.	Amount. Rs. cts.
Female ...	13 ...	2 50 ...	32 50	
Male ...	16 ...	1 00 ...	16 00	
				48 50
Cost of felling, splitting and trimming ...			20 00	
„ removal to Port ...			12 00	
Dhoney freight to India ...			22 00	
				54 00
Total charges ...				Rs. 102 50

* The figures, certainly those for the ten years 1862-71, are not to be entirely relied on. China has always taken a large quantity of ebony, yet the returns show the direct shipments there to have been only 200 tons a year during that period.

The outturn of	Rafters.	Reepers.
13 female trees is	100	150
16 male trees is	100	150
	200	300

200 rafters = 30 pagodas, which at Rs. 3·50 a pagoda fetch Rs. 105
300 reepers = 7½ pagodas do. do. „ 25

Total receipts ... Rs. 130

EXPORT OF PALMYRA WOOD.

207. *Figures from the Colonial Returns.*—From 1859 to 1870 the average number of rafters and reepers exported annually from the Northern Province appears to have been about 600,000. Since 1870 there has been a considerable falling off in the exports. From Statement V. the following figures are taken :—

EXPORTS of Palmyra Timber from Ceylon.

	Average Annual Export. Pieces.	Declared Value. Rs.
* 1862—66	297,973	64,948
1867—71	617,960	92,019
1872—76	423,268	86,925
1877—81	323,695	64,133

208. *Statement of the Northern Province Exports.*—Since 1876, owing, it is said, to the importation of Travancore and Burmah wood into Madras, but more probably to a decrease in the supply of palmyra trees and to a rise in price, the exports of palmyra timber have fallen off considerably. To show this with greater correctness, the following figures have been prepared from a return of exports furnished me by Mr. Twynam :—

EXPORTS of Palmyra Timber from the Northern Province.

	Average Annual Export. Pieces.	Declared Value. Rs.
1861—65	578,557	90,422
1866—70	633,324	94,079
1871—75	522,216	94,582
1876—80	307,424	63,740

In 1881 the number of pieces exported was 259,000, of a declared value of Rs. 65,000. If the average annual export be at present 300,000 pieces, and taking 5 rafters and 15 reepers—*i.e.*, 20 pieces—as the out-turn of each tree, 15,000 trees have to be felled annually. In addition to this, there is a considerable coastwise trade in palmyra timber which is not taken into account. In the 21 years, 1859–1880, an average of over 27,000 trees must have been cut annually.

209. *Is the supply of Palmyra trees decreasing?*—To determine whether the supply of palmyra timber is falling off is a matter of considerable importance. The palmyra at present only grows in any quantity in Jaffna and Mannár ; in the former the population is rapidly increasing, and cultivation is spreading over a very limited area. Under these circumstances, when a good price is offered for palmyra timber, it is to be feared that fresh sowings do not keep pace with the fellings. Certain small areas are planted every year with palmyras near Jaffna and the larger villages where the toddy rents make the trees valuable, but no systematic attempts are made to keep up the supply of timber. No rule exists, as in Tinnevelly, that for every tree felled another must be planted, and there is too much reason to fear that the large decrease in the exports is due partly to a failure in the supply. The Tamils throughout the Jaffna peninsula derive no small portion of their food from the palmyra products, whilst a large number may be said to live on the tree entirely. In the spring they make jaggery ; during the rest of the year they live on the money so earned, and on punatto and kelingoes. Apart from the timber supply, the maintenance of palmyra groves is, therefore, of considerable importance.

210. *Areca and Cocoanut rafters.*—The export of areca and cocoanut rafters is unimportant, and has only sprung up in the last few years, probably owing to a decrease in the supply of palmyra timber. They are so inferior to the latter, that if brought into competition they would never sell.

FIREWOOD.

211. All now exported comes from Mannár, and consists of odai (Acacia planifrons). The quantities shipped are unimportant, and the trade only merits attention in suggesting an economical means of carrying out works of improvement in future, and of getting rid of some of our valueless woods.

TABULAR STATEMENTS REGARDING THE EXPORTS FROM PRIVATE LAND.

212. Statement V. shows the exports of all forest produce grown on private land during the last 20 years, arranged in four periods of five years.

Statement VI. shows the annual value of these exports.

* The exports of 1862 are omitted from the Customs Returns.

213. *Imports of Teak.* The following figures show the imports of teak timber into Ceylon :—

TOTAL IMPORTS OF TEAK.

	Tons.	Logs.	Pieces.	Declared Value. Rs.
1862—66*	238	215	320,311	79,918
1867—71	662	—	20,986	203,216
1872—76	4,951	202,743	—	602,801
1877—81	4,376	4,264	8,544	588,045
	10,227	207,222	349,841	Rs. 1,473,980

IMPORTS OF CEYLON TIMBER INTO THE MADRAS PRESIDENCY.

214. Dr. Brandis, Inspector-General of Forests to the Government of India, has kindly obtained a number of returns from the Collector of Customs, Madras, from the Collectors of South Arcot, Madura and Tinnevelly, from Pondicherry and Tanjore, whence I hoped to be able to obtain useful particulars regarding the disposal of our Ceylon timber. The particulars given are, however, of little service, as it would appear that there is no careful classification or measurement of the timber imported. †

215. *Principal ports to which Ceylon Timber is shipped.*—The only use that could be made of these returns was to compile Statement VII., showing to what ports Ceylon timber is taken. From this it would appear that Pondicherry is the furthest point north to which direct shipments are now made from Ceylon. In 1876–77, over 800 tons were taken to the port of Madras, the quantity falling to 57 tons in 1880–81 ; in 1881–82 there were no direct imports. From Pondicherry southwards to Devipatam, a large trade is carried on in each port. The ports west of the Paumben channel, Kilakari and Tuticorin, take little, the returns mentioning that only wood for fishing catamarams‡ with jak and "white teak"§ is shipped there from Colombo and Trincomalee, with palmyra and some ironwood for jetties from Mannâr and Jaffna.

216. *Price of Firewood on the Indian Coast.*—West of Paumben the price of firewood appears to be low, Rs. 4 a ton, but on the east coast, at Devipatam and Tondi, also possibly further north, the price is very high ; at both places "1,000 pieces (1 ton) two cubits long, two fingers broad and thick" sell for Rs. 7 to Rs. 8. It is said that wood of a larger size would fetch Rs. 10.

CHAPTER IV.

FOREST MANAGEMENT IN THE PAST.

217. *General.*—Having given a general description of Ceylon forests, it will be best to consider next their past management with its financial results.

From the commencement of the coffee industry, between 1830 and 1840, appears to date the time when timber felling was first regularly commenced. Until then only ebony had been exported to Europe and China, and possibly some building timber from the northern end of the Island to India. The export of ebony from Ceylon is of great antiquity, but during the unsettled times which preceded the English rule, the trade in forest produce never assumed large dimensions. Under the Dutch and Portuguese the chief forest produce exported was cinnamon bark, that plant not being then, as now, cultivated in gardens.

218. *Commencement of Timber Trade.*—Soon after 1840 the timber trade appears to have become a regular business, and large quantities of timber of all sorts, both for internal consumption and for export, were cut annually. The fellings were on the permit or license system, under which a royalty, calculated on the local market value of the wood, or in the case of exports on its value at the port of clearance less the actual cost of transport, was levied. Before the trees were felled a permit or license had to be obtained from the district revenue officer, on which a deposit was taken, the balance not being due till the timber had been felled and a removal permit was required.

219. *Abuses of the License System.*—When contractors were allowed to go into the forest, subject only to the control of an unpaid headman, it could but be expected that far more timber would be felled than the licenses specified, and that the system should give rise to numberless other abuses. The permit holder was at liberty to select his own trees, and with such enormous areas to choose from, and with fictitious supervision, he could cut many times the number specified in his permit, besides injuring many more in finding timber to suit. Previous to removal, the headman was expected to examine and brand the different pieces of timber, reporting on their size and weight. On his report the 10 per cent. royalty (afterwards raised to 25 per cent.) was adjusted, and a permit to remove and ship the timber was given.

220. *Adjustment of Royalty.*—The royalty was fixed by certain returns sent in periodically by the Customs, but these officials had no means of ascertaining the correct value of the wood. Shipment was allowed at different places on the coast, the cargo being overhauled at some Customs' port before the ship received her papers. This provided the only means of detecting theft. It has been frequently laid down that Ceylon being surrounded by sea, thefts of timber are impossible : ships cannot go to another port without Customs' clearance, and the latter is not

* Excluding 1864, teak being omitted from the Customs Returns of that year.

† Correct information on the important points involved can only be secured by personal investigation at the various Madras ports ; these, soon after my return to India, I hope to be able to make.

‡ Lunumidella. § Probably halmilla.

given until the cargo has been thoroughly overhauled. In theory this no doubt holds good, but practically Customs' clearance proved of little value in checking thefts of timber, for it is notorious that large quantities of timber were shipped in excess of the felling or shipping permit.

221. *Illicit felling in the Northern Province.*—Mr. Twynam wrote, in May, 1871 :—" The practice was for a trader to obtain a license for 100 logs of a certain size, under cover of this to fell 200 or 300, removing the 100 to the port of shipment, hiding the rest in the jungle till a convenient opportunity offered for removing them to the port of shipment, where he would again hide them until an opportunity offered for shipment, the people of the village being in league with the trader." In 1869 matters had become so bad that the traders informed the Government Agent " that it was no use stopping licenses ; that there were quantities of timber hidden away in the jungle and in the sea at the port of shipment, in places only known to themselves ; that it would be better not to stop licenses, but to make a small revenue for Government and not to interfere with trade."

222. *Other Provinces in the same state.*—Other Provinces were in a very similar state, except that facilities of transport and of labour in the Northern Province enabled the people to make greater inroads on the forests than elsewhere. Mr. Morris also says that in 1872, when the issue of licenses was stopped, such large quantities of timber were found cut and hidden in the jungles, that they were sufficient for the supply of the timber trade in the Eastern Province for one year.

223. *The quantity of Timber sold up to* 1873.—Regarding the number of trees cleared before 1873, the year that the issue of licenses was generally stopped, it is impossible to frame an accurate estimate. The old license registers are incomplete for all the districts of the Eastern and Northern Provinces, but I secured at Mullaittívu a series of registers for the 30 years, 1844-1873, from which the following figures have been tabulated :—

MULLAITTÍVU DISTRICT.—Timber Sales for 30 years, 1844-73.

Description of Timber.	Number of logs. (From Registers.)	Royalty realized. (From Registers.)	Estimated average cubic contents of each log.	Total cubic contents.	Present price per cubic foot.	Value at present prices.
		Rs.	ft.	ft.	Rs. cts.	Rs.
Satinwood ...	70,399	38,883	20	1,407,980	0 75	1,055,985
Palé ...	53,932	87,896	12	647,184	0 62	401,254
Halmilla ...	10,830	5,413	10	108,300	1 0	108,300
Yavarani ...	5,705	3,333	12	68,460	0 50	34,230
Milla ..	1,603	1,288	12	19,236	0 50	9,618
Ebony ...	28,012	26,973	5 cwt. *	tons 7,003	Rs. 50 per ton	350,150
	Rs	163,786			Rs.	1,959,537

* Estimated weight per tree.

giving an average annual outturn of :—

		Trees.				Trees.
Satinwood	...	2,346	.....	Yavarani	...	190
Palé	...	1,797	.....	Milla	...	53
Halmilla	...	361	.....	Ebony	...	933

The figures are of interest, showing that satinwood logs were sold at less than half a rupee each, the word log meaning really tree ; that of palé trees, usually holding 40 cubic feet at least, six could be bought for one rupee ; whilst an average of over 900 ebony logs a year were sold at 90 cents, or 14½ annas, each. The last four columns will give some idea of the value of the timber, but the figures have been purposely taken very low. The ebony alone is worth Rs. 100 per ton instead of the value assumed—Rs. 50.

224. *Northern Province.*—In Sessional Papers III. of 1871 and IV. of 1875, some returns are given, from which I have extracted the following figures showing the permits issued during the eleven years, 1863-1873, in the Northern Province, excluding Mullaittívu. The figures have been divided into two periods, as, owing to illegal fellings in 1868, the issue of permits was restricted by Mr. Twynam.

STATEMENT of Timber felled in the eleven years, 1863-73, in the Jaffna, Mannár, and Nuwarakaláwiya Districts.

		1863-68. Trees.		1869-73. Trees.		Average annual felling. Trees.
Satinwood	...	18,312	...	5,058	...	2,124
Palé ...	...	63,770	...	20,118	...	7,626
Halmilla	...	2,791	...	1,088	...	352
Yavarani	...	2,266	...	747	...	273
Ebony	...	15,738	...	2,930	...	1,697
	Total ...	102,877		29,941		
Royalty realized...		Rs. 96,480	...	Rs. 29,941		

This includes the Nuwarakaláwiya District, now forming, with Tamankaduwa, the North-Central Province ; likewise the royalty paid on the inferior kinds of timber, of which, however, the sales were unimportant.

225. *Trincomalee District.*—From the same source the following particulars have been extracted regarding the Eastern Province :—

STATEMENT of Timber felled in the ten years, 1864–73, in the Trincomalee District and Tamankaḍuwa.

	Trincomalee District. Trees.	Tamankaḍuwa. Trees.	Average annual felling. Trees.
Satinwood ...	14,020 ...	1,804 ...	1,582
Palé	5,314 ...	— ...	531
Halmilla ...	7,734 ..	9,172 ...	1,690
Yavarani ...	2,577 ...	146 ...	272
Ebony ...	3,566 ...	14 ...	358
Total ...	33,211	11,136	

(Royalty not given in the Returns.)

I find elsewhere that the quantity of timber felled in the Trincomalee District during this period amounted to 36,178 pieces, of which 34,783 pieces are said to have been exported; the number of logs kept for home consumption amounting to 1,395 pieces only.

226. *Batticaloa District.*—Regarding the Batticaloa District, the only information available is that 14,262 licenses for the better sorts of timber were issued in the five years ending 1873. Fellings in the Batticaloa District were always heavy, most of the halmilla for Madras, and for oil casks used at Colombo, having come from there.

But how small the revenue must have been, will be seen from the following royalty scale which was in force from 1858 to 1863 :—

Satinwood ..	2*s.* per log.	Yavarani ...	2*d.* per log
Palé ...	8*d.* do.	Ebony ...	1*s.* do.
Halmilla ...	8*d.* do.		

227. *North-Western Province.*—From the North-Western Province I have not secured any complete data. Large fellings went on in the Puttalam District on account of its proximity to Colombo. From the only license registers obtainable the following figures are taken :—

PUTTALAM DISTRICT.—Principal Timber Sales, 1870-73.

	Satinwood.		Halmilla.		Ebony.	
	No. of trees cut.	Royalty.	No. of trees cut.	Royalty.	No. of trees cut.	Royalty.
		Rs.		Rs.		Rs.
1870.	675	1,363	820	991	520	839
1871	556	1,272	1,060	935	171	376
1872	279	1,859	731	1,694	10,816	21,419
1873	84	609	42	73	3,096	7,706
Total for 4 years .	1,594	5,103	2,653	3,693	14,603	30,340

The figures are remarkable for the large quantity of ebony which was felled—nearly eleven thousand trees in one year, at a cost of about two rupees a tree. The waste is reported in Sessional Paper IV. of 1877 to have been about 50 per cent. on the quantity paid for, so the destruction to the forests in these years alone would account for the present scarcity; the 14,000 trees cut in 1872–73 would, at the present rate of consumption, be sufficient to supply the Ceylon ebony trade for six or seven years.

228. *Error in allowing Traders to lay in stocks.*—The policy of allowing timber dealers to lay in a large stock of timber at a mere nominal cost appears to be one of questionable wisdom when Government was inaugurating systematic working in order to secure proper returns from the forests. Revenue at all cost is the cry in the annual report of the Puttalam District for 1872. The Assistant Government Agent rejoices in the fact that the timber revenue* was 773 per cent. higher than in the previous year. That the quantity of ebony cut was 6,325 per cent. greater, the waste being presumably in the same ratio, is another way of estimating the change, and, perhaps, more accurately.

229. *Summary.*—It is difficult to summarize correctly with incomplete figures, but it would appear that the licenses issued annually for the present Northern and North-Central Provinces with the Trincomalee District were as follows :—

	Satinwood.	Palé.	Halmilla.	Yavarani.	Ebony.
	Trees.	Trees.	Trees.	Trees.	Trees.
Mullaittivu District, average of 30 years	2,346	1,797	361	190	933
The rest of the Northern Province, average of 11 years	2,124	7,626	352	273	1,697
Trincomalee and Tamankaḍuwa, average of 10 years ...	1,582	531	1,690	272	358
Annual Total ...	6,052	9,954	2,403	735	2,988

* Revenue of 1871, Rs. 3,104; of 1872, Rs. 24,022.

The Batticaloa returns are incomplete, whilst those of Puttalam are available for too short a period to be taken into account.

230. *Annual outturn not large.*—Even after making an allowance for the fellings in the Eastern and North-Western Provinces, it will be seen that the annual out-turn of the forests was, according to the registers, by no means large for so extensive an area. The only conclusion one can come to, after going through all the forests carefully and seeing how thoroughly most have been denuded of first-class trees, is that these figures by no means represent the number of the trees felled or injured, nor the quantity of timber exported annually from the Island.

231. *Many evils connected with license system.*—In every way the old license system was bad and ruinous. There were no means of preventing illicit felling, or of protecting the standing timber from injury and damage; no thought of replanting or of assisting the natural process of reproduction, whilst, in the simple matter of revenue, Government did not receive its proper share of royalty. The latter was rated first at 10 per cent., afterwards at 25 per cent.: yet when ebony was selling at £8 to £12 a ton, trees averaging 5 cwts. at least were sold at 96 cts. to Rs. 2 a tree.

232. *Introduction of improved Forest Administration.*—The evils of this system attracted the attention of the Hon. John Douglas, the present Colonial Secretary, then Auditor-General, soon after his arrival in the Island, and he issued a circular calling for reports as to the levying and collection of timber revenue, and the general management of the forests. The replies, unanimous in a condemnation of the existing arrangements, were reviewed by Mr. Douglas in a letter addressed to the Colonial Secretary in June, 1871, and it is from this letter that we may date all the recent improvements in forest administration.

233. *Mr. Douglas's suggestions.*—Mr. Douglas's principal suggestions were that foresters should be appointed to the Eastern and Northern Provinces (those being, as we have seen, the principal timber-producing districts), and that their duties should consist in the selection of trees for felling, the right to cut and utilize the timber marked in a certain area being sold by auction to the highest bidder. The proposals also comprised details of what the Foresters' work would be, and other matters which have not as yet received the attention they fully merit. The establishment of nurseries to be kept up by guardians in charge of irrigation tanks, and the replanting of chenas with teak, jak and other trees on planting leases were mentioned.

234. *Foresters appointed.*—The result of these suggestions was that foresters were appointed by Sir W. Gregory in 1873 and 1874 for the Eastern, Northern, and Southern Provinces. The Forester's post in the Southern Province was abolished in 1874, owing, I believe, to the timber trade being almost entirely in the hands of private persons, who bought large areas of forest at nominal cost in 1830–40. Similar appointments were made in the North-Central and North-Western Provinces in 1877. In the Central Province, the superintendents of minor roads were from 1875 appointed supervisors of forests in addition to their usual duties, on salaries of about Rs. 500 a year. A forester has lately been employed to check chena cultivation in the Kandy and Mátalé Districts. The persons selected for appointment as foresters were, in the case of the Eastern and North-Central Provinces, officers of the Public Works Department; in the other Provinces they had not previously served under Government.

235. *Rules issued for the Foresters' Work.*—The rules for foresters, given in appendix B., were issued in October, 1874, in substitution of those first issued in 1873. They still remain in force. In addition to these rules the foresters had for their guidance certain suggestions drawn up by the late Dr. Thwaites, Director of the Botanical Gardens, Péradeniya, which related chiefly to measures for replanting, for assisting the national reproduction by clearing away scrub and creepers, and for the introduction of more valuable kinds of timber.

236. *Organization of the work.*—The foresters were placed in subordination to the Government Agents in all their work, maintaining, however, a somewhat distinct organization in office work and in matters of general routine, instead of forming part of the provincial revenue administration. In 1873 it was not considered advisable for Government to take the responsibility of working out timber from the forests, owing to the unfavourable results of a so-called experiment made in the Badulla District, of entrusting a Public Works Officer with the felling of timber. It is as well, though, here to notice, that the felling and conversion of the Monaragalla timber failed from defective superintendence, and owing to the position of the forests—fourteen miles from a cart track across hilly country. It was quite a misnomer calling it an experiment, when no one would care to buy timber without some means of carrying it away being provided. The timber consequently remained to rot in Mupané, where I saw it in July last. In the Western Province a small quantity of timber was also cut by Mr. Elliott for the Kalutara bridge from the Pasdun Kóralé, which did not prove a financial success. Small experiments of this sort are worse than useless, and it should be remembered that timber operations require, if they are to be brought to a profitable conclusion, most careful organization and more of personal superintendence and individual exertion than perhaps any work ever attempted by Government.

237. *Commencement to work out Timber.*—Under the revised rules of 1874 the foresters were to undertake timber works themselves, on what is known as the *direct system of working*, the arrangement being that the contractors should fell and bring to depôt the trees selected by the forester, the timber being afterwards sold by public auction, payment being made for felling and transport at a rate—per log or per cubic foot—previously agreed on.

238. *Neglect to select trees for felling, to divide them into logs, &c.*—The second paragraph of the foresters' rules directs that the trees to be felled shall be marked by the forester. This, I find, has been neglected, except in the Eastern Province. Contractors have been allowed to select the trees for felling, to cut them very high above the ground, and to waste timber in cutting up and squaring. The Forester has not always visited, or ascertained the position within some miles of the place where felling was going on. I have reported separately on the subject, as it is one

of the most important duties of the forester to choose the trees for felling, and himself to see that the whole of the timber is utilized to the best advantage; not to trust to contractors and cartmen, who will always consult their own interests.

239. *Share systems invented.*—All timber works appear to have been conducted on the direct system until 1879, when what are known as the "*share of timber*" and the "*share of proceeds*" systems were invented. Of these, a short explanation will be necessary, nothing of the kind having, so far as I am aware, ever been attempted before.

240. *Description.*—The *share of timber* working consists in the contractor bearing the cost of bringing a certain number of logs to depôt, receiving in payment a share—generally one-half, sometimes two-thirds—of the timber delivered. Under the *share of proceeds*, the contractor similarly bears all the expense of felling and carting in return for a share, previously agreed on, of the money received at the foresters' sales. The timber is delivered in depôt, and auction sales are held there.

241. *Where adopted.*—The systems would appear to have been originated in the North-Western Province in 1879, the example being very soon followed by the North-Central and the Central Provinces. In the Northern Province no share contracts have been made, and the Eastern Province has only worked out dead timber, dying trees in chenas, and branch timber generally on this plan.

Captain Walker thinks that people will work for themselves cheaper than they will for Government, and that when, as in the case of dead timber, they can be allowed to work when and as they like, it is possible to get a large quantity of timber brought to depôt which would otherwise remain to rot in the forest. This argument has some force, but I cannot express too strongly my opinion of the disadvantages of the system generally, for the two amount practically to the same thing. In special cases it may be better to work out dead and comparatively valueless stuff under some such terms, but no forest produce should be removed without having been inspected by the forester, and without proper arrangements for checking the carts or rafts in transit. The system is otherwise likely only to serve as an excuse for laxness of control.

242. *Origin of the arrangements.*—A desire that all revenue officers have of wishing to swell their receipts at all costs, to make the maximum of revenue with the minimum of expenditure, can have only originated the system, coupled as it was with a mad competition in forest revenue between the different Provinces, carried on without the least thought for the welfare of the forests, or of the real interests of Government. The budget allotments were unequally divided amongst the different Provinces, and in the absence of some control it was possibly natural for the Government Agent and the Forester to invent some system by which, say, the North-Western Province would appear in nett forest revenue not behind other Provinces which were more fortunate in securing large timber votes, and which were therefore able to bring out more timber by direct money payments. When the annual votes for timber works did not suffice to keep all applicants for contracts fully employed, these methods of making revenue without any expenditure were at once made use of. Contractors desirous of making large profits were only too willing to work on terms so unfair to Government, so remunerative to themselves, which, moreover, offered some of the many chances of sharp dealing so dear to natives.

243. *The manner in which the work was conducted.*—The many disadvantages inseparable from any such arrangement are self-evident, but the want of proper system and central control involved many others, work having been conducted in the following way.

Having prospected with the help of veddahs or of village Sinhalese and found a forest conveniently situated, the contractor made his offer to work out a certain number of logs for a share of the timber or of the sale-proceeds. The contract being signed and the necessary permit issued, the timber cutters and cartmen were sent to the forest. The cutters were allowed to select the trees for felling, to cut as many as they liked, and to log and square them at discretion; the carters then removed the timber, little attempt being made to control the work from first to last.

244. *The Contract generally sublet.*—The contractor himself did not always visit the forest. Even when he provided the bullocks and carts, he sublet the felling and logging contract to timber cutters, who again employed the Sinhalese to find suitable trees at a fixed sum per tree, these people also agreeing to clear a cart track leading to each. Under this system every one consulted his own convenience. The cutter took such trees as were most convenient, the cartmen and cutters alike preferred short light logs to long ones, and generally one is inclined to question the advantages over the license system of work on these lines, when the openings for great waste and theft are so patent.

245. *Effect of large forced sales on the market prices.*—After the contractor had carted all the timber to depôt and obtained his share, it competed in the market with the Government timber. Having borrowed his working capital he was obliged to sell soon. Large quantities thus thrown on the market only forced down prices, and the Government share sold usually at much lower rates than if the whole had been sold by Government.

246. *Absence of control in the forest, or on the timber during transit.*—No measures were taken to check the number of trees felled or their outturn, to check the carts going along the roads, or to see if the arrivals in depôt corresponded with the fellings. Receiving a share of timber, the contractor had only to mix up this share with stolen timber to defy detection.

247. *Excessive remuneration one result of the system.*—One would complain less of these disadvantages—more or less inseparable from the system—if the share given to the contractor represented at current prices fair payment for work done, but this was far from being the case. The following table drawn up by the Assistant Government Agent of Puttalam will show how large the losses were. The figures are those of actual transactions.

SHARE OF TIMBER CONTRACTS.

Timber.	Government share.		Contractor's share.			Cost of felling and transport.			Loss to Crown on Contractor's share.
	Amount of Timber.	Value.	Amount of timber.	Current market rate.	Value.	Amount of timber.	Current market rate.	Value.	
	c. feet.	Rs.	c. feet.	Rs. cts.	Rs.	c. feet.	Rs. cts.	Rs.	Rs.
Halmilla ...	5,020	3,288	5,020	0 65½ per cubic foot	3,288	5,020	0 20 per cubic foot	1,004	2,284
Ebony ...	tons 179	9,381	tons 179	52 41 per ton	9,381	tons 179	15 0 per ton	2,685	6,696
		12,669			12,669			3,689	8,980

248. *General abstract of share working, North-Western Province.*—These figures by no means represent the total loss. To show this I have prepared an abstract of a return furnished me by the Colonial Secretary for the years 1878 to 1880, divided into two heads, according as a *share of timber*, or a *share of sale proceeds* was given in payment. The return was prepared by the Forester, and he has estimated the value of the timber given to the contractors at the same price as that which the Government share realized.

PAYMENTS by Share of Timber.

Description of Timber.	Timber received by Government.		Timber given to Contractors.		
	No. of Logs.	Value.	Share given to Contractor.	No. of Logs.	Value.
1879.		Rs.			Rs.
Ebony	247	4,070	One-half	247	4,070
Dead timber ...	—	3,697	Two-thirds	—	7,694
Tammana	—	—	—	—	2,364
1880.					
Satinwood	77	720	One-half	72	673
Ebony	1,525	14,802	do	1,064	9,382
Halmilla	548	3,294	do	548	3,294
Palé	170	1,763	do	60	667
Dead and small timber ...	1,983	1,927	Two-thirds	—	3,662
Halmilla	154	1,635	One-half	154	1,635
		31,908*			33,441†

PAYMENTS by share of Auction Sale Proceeds.

Year.	Description of Timber.	Total quantity of Timber sold.	Amount credited to Government.	Share given to Contractor.	Contractor's share of proceeds.
			Rs.		Rs.
1878	Dead Timber ...	—	6,526	Two-thirds	11,552
1879	Ebony ...	189 logs	2,950	One-half	2,950
1880	Ebony ...	650 tons	23,816	Two-thirds & one-half	30,252
		Rs.	33,292*	Rs.	44,754†

From these figures, and from the returns of revenue and expenditure obtained from the Auditor-General, it appears that in this Province for the three years—

	1878.	1879.	1880.
	Rs.	Rs.	Rs.
The gross forest *Revenue* was ...	10,219	18,748	58,474
The gross *Cash Expenditure* during that period being	10,236	10,025	8,953
The working in 1880 was, therefore, an extraordinary success as far as nett receipts go, or according to the accounts; but when we enquire into the working, we find that in these years the timber given in payment, or the payments made as a share of sale proceeds, amounted to	11,552	17,078	49,565
Bringing the *total expenditure* to ...	Rs. 21,788	Rs. 27,103	Rs. 58,518

* Total value received by Government. † Total value received by Contractor.

If these figures are correct, the apparent profit, as shown by the accounts, was really a loss.

249. *Absence of all details of share working in the accounts.*—The matter will be alluded to further on, but I should here briefly draw attention to the system on which the accounts are kept. As sent in, they do not show any of the share transactions; of these no proper account is kept, and neither in the Forester's or in the Government Agent's office is there any proper cash or stock account kept up, showing how the forest work is carried on—whether payments are made in kind or in money. As far as I have been able to ascertain from the figures supplied me during the years 1878, 1879, and 1880, the value of timber or cash shares of sale proceeds given to contractors in payment for work in the North-Western, Eastern, and Central Provinces amounted to Rs. 172,670, none of which appeared in the Colonial accounts, although forest capital of that value had been expended.

250. *Financial drawbacks of share working.*—These figures will illustrate the financial disadvantages, which practically amount to this: to bring one ton of ebony to market—work which we can get done for Rs. 15 in cash—one ton of ebony was given to the contractor having an intrinsic value of, at forced sales, Rs. 52; at open market prices, Rs. 90 to Rs. 110. Surely Government credit is not so low that it cannot get sufficient money to work out a few tons of ebony at Rs. 15 a-ton, instead of giving three to six times as much by paying in kind! The price of other timber might sink so low, that it would be to the disadvantage of Government making a cash payment for wood difficult of transport, of low value, and uncertain demand. But with ebony, having such a high intrinsic value, this could never be the case. The demand is steady, the supply is limited, and the Ceylon Government has the practical monopoly of the China market. Anything so entirely opposed to commercial principles can hardly be imagined, and the large actual loss shown by no means represent the losses which Government must suffer for some time from an overstocked market.

251. *The administrative evils even greater.*—The financial disadvantages, however great, do not by any means equal the administrative evils which I have already mentioned, nor do they represent the waste of timber which always took place. In Pallakelle forest, 25 miles north of Kurunégala, I found that a Tamil, dismissed from the Public Works Department and working here on share contract, had felled and left many fine pieces of ebony, some of which had been cleaned by the fellers, others being untouched. This was seen in a short walk through the forest, not in making a detailed inspection. In the same forest there are some of the finest halmilla in the Island—trees 5 to 6 feet girth, running up 50 or 60 feet to the first branch. The contractor had been felling a large number, removing only the butt end logs and leaving more good timber than he removed, owing to a fall in the market price of timber causing the contract to be less profitable than when commenced.

252. *The North-Western Province not worse than others.*—Wherever the system has been allowed to exist, matters are equally bad, and I have only mentioned the case of this Province because it was the first which I visited, where no concealment was made of work being carried on in this way, and where I could consequently judge of its ill-effects.

253. *The North-Central Province.*—In the North-Central Province I was given to understand on my first visit that all work was done by direct agency and for cash payments. It was only later that I discovered how matters stood. I spent some time in this Province, but owing to the extreme difficulty of getting correct information regarding forest work, I learnt comparatively little. From information received after leaving the Province, there was reason to suppose that I had been quite misled; on a second visit I found this to be the case, and from statements now sent in to the Colonial Secretary, it appears that the share system has been in full working there since December, 1878, and there are now more unexpired share contracts in this Province than in the other Provinces combined.

254. *Share working carried on against the Government Agent's wishes.*—The Government Agent was equally deceived regarding the true state of affairs, and indeed gave me a memorandum comparing the working of the different Provinces, pointing out the many disadvantages of this method of working! The Forester introduced share working during Mr. Dickson's temporary absence from the Island, and continued it until it was recently stopped by Government. Its introduction in the North-Central Province appears less excusable, when the annual expenditure vote for timber works was always more than sufficient. I am at a loss to understand how the system was carried on, when there is no record of it in the accounts sent in to the Auditor-General, nor in those of the Forester submitted to the Government Agent.

255. *Arrangement for selling all timber to cutting and carting Contractors.*—In the North-Western Province, to keep up prices, it was arranged that the contractor should buy up the Government share of the timber brought to depôt. The contractor agreed to bring (say) 100 halmilla logs to Kurunégala; in return for this work he would receive a half-share of the timber, *i.e.*, 50 logs; he would also have to buy the Government half-share at a price (say 80 cents per cubic foot) fixed at the time of making the contract. This arrangement was also made in the North-Central Province, and Mr. Milne informed me that the felling contractors had for some eighteen months been the only purchasers of timber at Trincomalee. Nothing can be imagined more open to abuse when little check is exercised in the forest or on the transport of the timber. Auction sales must be open to all, and the contractor might in this way become a buyer; but it is not a thing to be encouraged, and certainly not, as in this case, to make it a condition that a contractor, allowed to range at large over the forests, becomes the dealer.

Whether much wood was stolen we have no means of judging; but when, in the majority of cases, the only check on the numerous contractors was exercised by the divisional clerk (overseer), and nearly all the marking of timber was entrusted to him or to two kanganies, it appears there were decided openings for robbery. The Forester did not see one-tenth of the trees felled, or of the logs previous to their removal to depôt. The general working was carried

on very loosely. A contractor refusing to cut the trees which the Assistant Forester had spent two months at Pádiviya in selecting, received permission to cut timber wherever he chose. The same thing occurred with another contractor at Madawachchi, and at the time of my visit in June, the Assistant Forester had received no official intimation of the changes, although he was supposed to supervise the felling. When in Tamankaduwa with Mr. Milne, we found a party of timber cutters who made no concealment of the fact that they were working for the Forester's overseer who was entrusted with the duty of stamping the timber and managing the depôt. In the list of current contracts referred to above, the name of the clerk's uncle, Chellappa, appears as one of the principal contractors. When, in addition to circumstances such as these, the control of the headmen was removed and the shipping of timber facilitated, it is but too likely that more timber found its way to India than was paid for.

256. *A change of system partly the cause of failure.*—The present arrangements for working the forests cannot be regarded as an unqualified success, either from an administrative, or as we shall see further on, from a financial standpoint. A change of system everywhere presents difficulties, and, as in this instance, with the people that the Foresters had to employ as felling and carting contractors the same who had derived their living from the old license system, and who consequently were bitterly opposed to any change, very serious obstacles had to be contended with from the commencement.

257. *A want of combined action.*—But reasons for the comparative financial failure are not difficult to find elsewhere. In reviewing the present system of forest working, the want of combined action and uniformity of system cannot fail to attract attention. Each of the Provinces has worked on its own lines, without the least communication with its neighbours. No control on the methods and system of working has been exercised by the central authority in Colombo, and rarely have steps been taken by the provincial authorities to find out how forest work was being carried out elsewhere. The natural result was that all had to go through the laborious and wasteful process of experiment and failure.

The overwhelming power which a monopoly or combination in any trade must give was entirely lost sight of, and instead of mutual assistance being rendered, there has been a great waste of valuable material and money, owing to the jealousy with which each Province views the others, each fighting for itself against the rest. Emulation between individuals is desirable; but when two Government officers work through the same seaport, it is manifestly more to the advantage of both, by combination, to secure contracts being carried out on reasonable terms, than for them to work on separate interests like two opposing private firms. Instead of attending to proper forest work, greater zeal appears to have been displayed in quarrelling about an ill-defined provincial boundary. It makes no difference when the areas of forest are so large, whether the North-Central Province boundary runs half a mile further east or west, any more than it can matter which Province brings to depôt the few ebony trees on the disputed boundary, as long as the interests of Government do not suffer. Yet the competition between the different provincial Foresters appears to have been carried to such a length that when in one Province, owing to current prices appearing lower, I suggested ascertaining those realized by other Foresters, the answer was: "the information would probably be refused."

258. *Over-supply of the markets and fall in prices.*—In the supply and sale of timber the want of some control over the forest system, so as to secure homogeneous working for the common good, is the more striking, because it admits of proof in figures. Up to 1878 only the Northern and Eastern Provinces were selling timber, whilst the issue of permits was stopped in the North-Central and North-Western. The two former had the practical command of the market, and prices were high. Of ebony there had been no sales between 1873 and 1876, and prices were about at their proper level; but from 1878 up to the end of 1881 all the Provinces endeavoured to bring the maximum quantity of wood to market, without the least attention to the natural laws of supply and demand. The only result in a limited market could be to cause a fall in price, increased in severity by the general depression of trade, by an ever increasing supply, and by want of combination between the sellers. Instead of working hand-in-hand to keep up prices and to keep back supplies, the following statement will show that in ebony the production rose from 285 tons in 1878 to 786 tons in 1879, and with a falling market to 2,225 tons in 1880.

SALES OF EBONY.

	1878.		1879.		1880.	
	Tons.	Average price. Rs.	Tons.	Average price. Rs.	Tons.	Average price. Rs.
Northern Province ...	—	—	—	—	315	61
Eastern Province ...	—	—	130	75	—	—
North-Central Province ...	272	131	623	100	300	84
North-Western Province ...	8	35	28	105	962	—
Central Province ...	105	105	—	—	—	—
Total sales ...	385	—	781	—	1,577	—
Add shares given to Contractors (approximate only) ...	—	—	105	—	648	—
Total production ...	385	—	886	—	2,225	—

The price fell from an average over the whole transactions of Rs. 124 in 1878 to Rs. 70 in 1880. In other words, to make the same quantity of revenue in 1880, 900 tons instead of 2,225 tons would have sufficed, had there been a combination to keep up the prices of 1878.

Statements showing the amount of satin, halmilla, and palé sold during these years are also of interest :—

PROVINCE.	1878.		1879.		1880.	
	Quantity.	Average Rate.	Quantity.	Average Rate.	Quantity.	Average Rate.
Sales of Satinwood.	Cub. feet.	Rs. cts.	Cub. feet.	Rs. cts.	Cub. feet.	Rs. cts.
Northern ...	2,084	0 60	2,759	0 60	2,209	0 60
Eastern ...	21,485	0 94	11,308	0 86	14,660	0 80
North-Central ...	5,634	1 0	12,700	0 99	13,400	0 96
North-Western...	2,770	0 89½	4,638	0 86	6,558	0 73
Total quantity ...	31,973	—	31,405	—	36,827	—
Sales of Halmilla.						
Northern ...	—	—	—	—	2,800	0 50
Eastern ...	9,542	1 21	6,050	0 96	23,402	1 24
North-Central ...	642	1 2	14,749	0 99½	11,200	1 2
North-Western ...	—	—	—	—	8,108	0 71½
Total quantity ...	10,184	—	20,799	—	45,510	—
Sales of Palé.						
Northern ...	8,439	0 75	6,152	0 75	4,990	0 76
Eastern ...	3,221	0 75	819	0 36	28,005	0 45
North-Central ...	623	0 88	1,170	0 88	2,209	0 81
North-Western ...	—	—	—	—	2,351	0 64
Total quantity ...	12,283	—	8,141	—	37,555	—

259. *Variation in the prices paid in different Provinces.*—In these statements it will be noticed that there is a great variation in the prices realized, and that the fall in price is by no means uniform throughout the Island. This variation by no means corresponds with differences of quality. In Colombo it would be considered suicidal for one manufacturer to go on selling his goods for years without ascertaining what other merchants were getting. Yet such was the policy followed—each Province competing with the others for the bids of the merchants, no means being taken to ascertain current prices in other parts of the Island, and sales being held at Batticaloa and Trincomalee on the same day. In another case, when prices were already much lower than in other parts, the local dealers succeeded in reducing the Government reserve still further by threatening to go and supply their wants in the markets where higher rates were ruling!

260. *Timber scarcely saleable now.*—Over-production and competition combined have so reduced prices that it scarcely pays to bring timber to depôt. Most of the woods are now unsaleable, except at very low figures; the dealers, both in the Island and in the countries to which Ceylon timber is shipped, hold large stocks, which must be worked off before any steady demand for fresh-cut timber can spring up.

261. *Method of selling timber.*—All the timber worked out by Government is brought to a sale depôt, generally at an adjacent seaport, and sold by auction. In the selling of timber each Province has had its different system.

At Batticaloa, the Forester reserves all the best wood for the Public Works Department and the Madras Gun Carriage Factory. Auctions are held periodically when ships laden with rice are in port waiting for return freights to India. On these occasions bidding is very free, the shippers being satisfied with profit sufficient to pay the return freight of the ship.

At Trincomalee, auctions are held monthly (about the 20th) by the North-Central Province Forester, all produce being sold in that way under a reserve, except of course that taken by the Public Works Department at a fixed rate.

At Jaffna and in the North-Western Province, sales are held periodically, all produce being sold to the highest bidder under a small reserve.

262. *Auction sales of good timber not recommended.*—Experience in India has taught that auction sales of good timber rarely succeed, and Ceylon experience points in the same direction. The native purchasers always combine to keep down prices, and a reserve price is fixed which the buyers seldom bid up to. The time of the Forester is consequently wasted in going through the form of an auction, in leaving proper forest work and going to and from the sale depôt, when it is a foregone conclusion that none of the timber will be sold.

The monthly sales at Trincomalee were held under the supposition that Colombo firms would send representatives to bid for ebony, &c.; this they failed to do owing to the great expense and difficulty of getting there, and partly owing to a reserve being fixed, often out of all keeping with the prices current in London and China. The trade was therefore left entirely in the hands of local chetties, who combined to keep down prices, knowing perfectly well that ultimately the price must be reduced. Combination gained the day, and finding that the local authorities were ignorant of the current prices in Colombo, &c., the finest timber was ultimately secured here and elsewhere at very low rates.

263. *Wood sold to dealers only.*—This forms one of the worst features of past work. Wood sold by auction is bought up by natives and resold at a heavy profit. The fall in price at the Government sales is not met by an equivalent in the Colombo market prices. Satinwood sells retail for the same price now as it did two years ago. With ebony, we find a difference of 100 to 200 per cent. in the price paid to Government and that which shippers in Colombo have to pay. The timber trade is at present in the hands of a few middlemen, who combine to keep down prices at Government auctions, and to keep them up in Colombo. The finest ebony on the Mutwal beach was bought at a Government sale for Rs. 25 a ton; adding Rs. 15, the actual cost of carriage to Colombo, it was laid down for Rs. 40 a ton: the owner will not sell under Rs. 90. In the same way at Polgahawela, Rs. 30 only were bid for a class of wood selling for Rs. 70 to Rs. 90 in Colombo.

264. *State of the foreign markets.*—The following extract from a letter received from Messrs. Churchill and Sim, the leading timber brokers in the London Market, will show how far the market has become overstocked:—"The market here for satinwood has been completely glutted with wood for the past six months, and we now hold a large stock for which we cannot obtain £6 per ton (of 50 cubic feet), whereas twelve to fifteen months ago we were selling at £20." £6 a ton is equivalent to about Rs. 30 in Ceylon, or about 60 cents a cubic foot, freight and other charges coming to £3 a ton or more. Satinwood is, therefore, 25 per cent. cheaper in the London Docks than in the Ceylon Government sale depôts.

265. *Over-measurements.*—Even in arranging the sale measurement of timber some supervision would have benefited Government interests. Ebony is always sold by the ton weight, and in the trade is invariably weighed when sold. At Trincomalee, the Forester of the North-Central Province told me he was allowing 40 cubic feet measurement to the ton. As Ceylon ebony weighs about 75 lbs. to the cubic foot, or 30 cubic feet to the ton, I recommended a reduction of the allowance by 25 per cent., and that the actual weight be always ascertained. In the Mátalé District, the ebony was neither measured nor weighed, but a "liberal estimate" was made of the weight. Had there been any control, or the least comparison of results and working, this extreme liberality with Government property, presenting the purchasers with 20 to 25 per cent. more than they paid for, would have been obviated.

266. *Tapping ebony trees still continued.*—Going through a forest worked by the traders, one is struck by the number of rotten ebony trees. Almost every stem over four feet in girth has a large gaping wound, where the feller "tapped" for the black heartwood. The quantities of heart and sapwood vary very much, so if after tapping he found the proportion of the former insufficient, he went on to the next tree, the result being that through the hole rot set in. This destructive practice has only been discontinued in one Province.

267. *Neglect of protective measures prescribed by the Ordinance.*—Under the Timber Ordinance, timber in transit from Crown forests should be stamped and covered by a removal permit, issued by some person authorized by the Government Agent. A person felling timber has also to get a permit. In some Provinces these checks have been neglected. Trees are felled without permit, and the stamping of timber is left to subordinates, or not carried out at all; timber is removed from the forest without any control of the carts or rafts in transit. The headmen in more than one Province no longer assist the Forester in checking timber, and practically the contractor has the run of the forest.

268. *Resources little developed.*—The resources of the forests have as yet been little developed. Owing to a glut in the market of the finer woods, it has not been possible to work out any of the commoner woods, forming so large a proportion of the forest in the dry zone, with a chance of finding a sale. Many are good, and have, I believe, already met with a ready sale for tea boxes, plumbago casks, &c., when cleared off private lands. Of tanning materials the sales up to the present have been very small. With mangrove swamps along the estuaries, and large areas covered with Cassia auriculata—yielding the only bark used for tanning in Madras,—some revenue ought certainly to be made. No firewood has been cleared in Crown forests since 1864, at which time there was a large export to India, and we could well afford to get rid of much of the commoner timbers, which prevent the better kinds growing. Timber work has as yet only been carried out by Government agency in the dry zone. On the western coast the trade in soft woods has remained in the hands of private parties, although offering great opportunities as a source of revenue.

269. *Forest protection.*—The other matters that remain for consideration are works of improvement (planting, &c.), the formation of reserved forests, the sales of forest land, and the general protection of the forests. The difficulties regarding the latter will be explained in discussing the existing forest legislation. It is only necessary here to notice the control of chena cultivation.

The presence of Foresters in the remoter parts of the district is sometimes of assistance to the revenue officer in checking illicit chena cultivation; but in the absence of any system by which chenas would only be allowed on permit, and without the Forester having proper authority to investigate suspected offences, it is evident that he can exercise little control. Finding a piece of forest cleared in the Kurunégala District, he has no means now of ascertaining whether it is done with permission, whether it pays revenue, &c. The matter is reported to the Government Agent and is then delegated to the local headman, with whose connivance the clearing was probably made, instead of the Forester being empowered on the spot to carry out an investigation on behalf of the Government Agent, and to compel the owner to produce authority from the latter for making the clearing, or to show some proof of title to the land.

In the Southern and Central Provinces, where the checking of chenas is the main duty of the Foresters, these officers have to go on their rounds unprovided with any means or authority for exercising control. When they come across what appears to be a new forest clearing, they

have to wait there until the headman comes to say if the land is Crown or private property. The officers may be blamed for not turning their time to better account, but not if the defective system be considered with which they are expected to work, nor if the difficulties of country or climate be borne in mind. Any one expecting chenas to be effectually checked in this way in any part of the moist zone should try it for one day, wading half the time through paddy fields and covered with leeches; he must go not as a Government Agent but as a Forester, whose visits are not appreciated, and who has no one to see to his comfort.

WORKS OF IMPROVEMENT.

270. *General neglect of works of Improvement.*—Under this head, the rules issued for the guidance of foresters contemplated the thinning out or "auslüuterung" of inferior woods, and the introduction of better species. No systematic work has hitherto been done, a want of funds having delayed planting or other works of improvement on a large scale.

271. *Teak.*—In the Eastern Province, a few chenas have been sown or planted with teak, and in the Southern, Western, and North-Western Provinces some small teak plantations exist, most of which are the remains of the plantations made in the time of the Dutch.

Old Dutch Plantations.—Considerable plantations were made at different times; some have been cleared and gradually absorbed by the surrounding properties; others have been sold. Generally, the trees now standing are only natural seedlings or stool shoots from the trees originally planted. From some of these plantations timber has at different times been cut for public purposes, but little has been sold. The cost of maintenance is in most places nominal, and so is the supervision. The Akuressa plantation in the Southern Province is leased annually at Rs. 2·50 for cultivation, the branches being lopped to manure the ground. There is reason to fear that similar cultivation goes on in other areas planted with teak, and that, according to statements made by natives, in addition to lopping, the brushwood is annually burnt to raise a crop.

In the Southern Province there are eight of these old plantations with a joint area of 13 acres. The trees are only two to three feet in girth, many have been cut out, and the ground is not fully stocked. In the Western Province there are nine old plantations amounting to 37 acres. The trees are of all sizes up to five feet in girth; none of the areas are fully stocked. Some are encroached on, and one is claimed by a Sinhalese by right of 50 years' occupation!

272. *New Teak plantations in the Southern Province—Kekanadura.*—In the last ten years a few small plantations have also been made. In the Southern Province there are two—Kekanadura, 30 acres, rainfall 68 inches; and Hali Ella, 44 acres, rainfall about 85 inches. Kekanadura plantation is five miles from the town of Mátara, under a tank, from which it was originally intended to irrigate the trees. The 30 acres have been planted up with teak at different times since 1874—20 acres at 12 feet, and the balance at 6½ feet. The trees have not grown well, partly owing to the plantation being fully exposed to the south-west monsoon, but principally owing to the inferiority of the soil, which consists of a very light sandy loam, one to two feet deep, over impermeable strata of kabuk and gravel. The natural vegetation, consisting of Dodonea viscosa, &c., shows how poor the soil is. The trees are much wind-blown. A public unfenced road runs through the plantation, and the fact that there is no Crown land adjoining to admit of further extensions makes the location of the plantation very undesirable.

273. *Hali Ella.*—This consists of a belt, two chains broad, on the slopes round the margin of Hali Ella tank, 15 miles inland from Mátara. The forest formerly ran down to the water's edge; between 1877 to 1881 it has been gradually cleared from this narrow strip, and teak have been planted out, partly at 12 feet, partly at 6½ feet apart. Taking the area planted at 44 acres, the length of the plantation is 2¾ miles. All round the planted belt there is forest. The growth is very poor, owing to the natural inferiority of soil and to the mistaken system of soil cultivation, all the weeds being repeatedly removed and the better surface soil lightened, only to be washed into the tank by the first shower of rain. Cattle, owing to the want of a fence, have in many cases damaged the trees. There is no object in planting round the tank, as the level of the water is much below that of the plants. The annual cost of these two plantations is Rs. 500, not including the Forester's salary.

274. *Western Province—Hanwella.*—At Hanwella, 18 miles from Colombo on the Ratnapura road, there is a small plot covered with teak near the Hanwella rest-house, from which, in 1881, 110 trees were cut, realizing Rs. 1,285. It has now been replanted. The rainfall here is about 100 inches.

275. *North-Western Province—Puttalam Teak Plantation.*—In the North-Western Province, two miles inland from Puttalam, the Forester planted, in 1880 and 1881, 8 acres with teak, chiefly 6 feet apart. An additional 4 acres has now been cleared. The soil is a light sandy loam. The clearing is surrounded by forest, and as long as that stands, is well protected from the wind. The rainfall is 45 inches. The cost of clearing the original forest has been Rs. 30 an acre: this has been met by savings made by the Forester during four years from his transport allowance. The nursery work and planting out have been done at odd times by the Forester's depôt and baggage coolies, with some assistance from prisoners in the Puttalam jail and poll-tax defaulters. The trees have grown very well, those of 1880 being 23 feet high, but straggling and ill-shaped, having been planted 12 feet apart. The five months' seedlings put out in November, 1881, 6 feet apart, are now 12 feet high; all are very healthy and completely cover the ground. As the work may be said to have been carried out without extra expense to Government, Mr. Maggiolini having at a sacrifice of his personal comfort kept down his travelling expenses, it appears most creditable that he should have succeeded in making the first really successful teak plantation in Ceylon, in a position where its unlimited extension is possible, although scarcely advisable. The soil and climate are not suited for growing fine timber, and when the trees reach the height of the surrounding forest the upward growth will probably stop.

276. *Teak chenas, Eastern Province—Pulukanáwa.*—The best teak chenas in the Eastern Province are near Pulukanawa tank. In the earlier attempts, in 1876, the teak seed was sown when the chena was cleared with the Indian corn crop, and no maniok or plantains were allowed. In 1877 and 1878 some land was sown as the plantain crop was dying down. The soil is bad—gravelly and sandy loam of no great depth, and having been thoroughly exhausted by the crops, is now covered with illuk grass and venangu stool shoots. The trees are unequal, and they have generally a rather stunted appearance. Those sown in 1876 are 20 to 25 feet high, 1 foot 3 inches to 1 foot 7 inches in girth; the younger trees are 20 feet high, and of 12 inches' girth. One cause for only partial success is the distance at which the trees stand. The total area thus planted in the Eastern Province is small. The work has hitherto been done by the Forester, and the cost has been nominal.

RESERVED FOREST LANDS.

277. *Reserved Forest Lands proclaimed under the Timber Ordinance.*—Under Ordinance No. 12 of 1840, and under the present Timber Ordinance, various forests have at different times been proclaimed in the *Government Gazette* as *Reserved forest lands*, in which either no timber may be cut for any purpose whatsoever, or in which no valuable wood may be cut for agricultural implements. These forests are situated in the Western, North-Western, Southern, and Central Provinces.

278. *Other Reserves.*—There are also so-called reserves, which are not proclaimed as reserved forest lands under the Ordinance, but are held by the Government Agent as reserved owing to some circumstance, such as their being village grazing lands, &c., rendering their sale inadvisable.

279. *Proclaimed and unproclaimed reserves practically the same.*—Although the two classes of reserved forest would appear to be quite distinct, there is little real difference between them. When reserved forest lands are proclaimed under the Ordinance, the Kóralé or Pattu, the name of the forest, its situation and area are usually specified as sent in by the native headman. A list of all Proclamations hitherto published is given below.

LIST of Proclamations relating to Reserved Forest Lands—Ordinances Nos. 21 of 1848 and 6 of 1878.

Western Province.

Proclamation dated	3rd May, 1875 (*a*)
Do.	20th May, 1878
Do.	20th October, 1882

North-Western Province.

Proclamation dated	21st November, 1873 (*a*)
Do.	1st May, 1874
Do.	2nd October, 1874
Do.	6th September, 1878 (*a*)
Do.	18th November, 1880

Southern Province.

Proclamation dated	11th October, 1865 (*a*)
Do.	11th October, 1865 (*b*)

Central Province.

Proclamation dated	25th October, 1856 (*a*)
Do.	19th December, 1856 (*a*)
Do.	6th September, 1882

(*a*) Lands from which no wood is to be cut for any purpose whatsoever.
(*b*) Lands from which no satinwood or other valuable timber is to be cut for agricultural implements.

280. *Difficulty in ascertaining the situation of proclaimed reserves.*—The means taken to procure information regarding proposed reserves, and the procedure previous to their being proclaimed, appear most incomplete. Having once been gazetted, the reserved forest lands are quite lost sight of; only in one or two cases have I been able to find out where they actually are.

281. *Not demarcated, and no measures taken to lay down their position on the ground.*—No measures have been taken to demarcate the reserves, or even to ascertain through a properly qualified officer whether they really exist as forests. In some Provinces no boundaries are assigned in the lists, and no attempt was ever made to bring to the notice of the local headmen and people, that within such and such limits certain acts were prohibited. In the Government Agents' offices there is no record of what reserved forests there are,* nor does any one know whether they still exist. When land is surveyed for sale, it cannot be told from the records in the Government Agent's office whether it forms part of a reserve or not. In the Southern Province there are 56 forests proclaimed as reserved, within 31 of which *no timber* should be cut *for any purpose whatsoever*, and yet I was assured twice at the Government Agent's office that there were no gazetted reserves in the Province. What care has been shown in their selection is shown by Yále, a country covered only with scrub being included. Part of the land now sold for cultivation at Tissamaháráma appears to be part of another reserve. In the North-Western Province, again, I could only hear of two Proclamations relating to the Province, although there now prove to be five. Maragalla forest (Udapola coffee estate) was included in a Proclamation of September, 1878, after it had been sold.

282. *Incomplete delimitation.*—A moment's consideration of the manner in which these reserved forests are formed almost precludes all idea of proving an encroachment. To show how little service the reservation of a forest at present is, I need only refer to a report of the Forester, North-Western Province, on Handapahangaha Mukalana and Maragalle Mukulana, which appear to be reserved as Nos. 20 and 21 in the Proclamation of 6th September, 1878. These two forests are said to have a respective area of 1,300 and 2,150 acres. In endeavouring to locate the reserves the Forester finds the blocks passing by those two names not more than one-fourth the above acreage. The presumption is, that it was intended to include other localities adjoining, which are

* I mean that no special record is kept up. There is naturally the file of *Government Gazettes*, as in other Government offices, but nothing beyond this; it was only through the Colonial Secretary's Office that I was able to secure complete lists of all reserved forest lands.

called by a variety of names, such as Etambagasgodakanda, Kitulakanda, &c. Regarding this there is no information, and although the villagers may admit that these form part of the actual reserve, although we find they have been chenaëd in several places, technically no encroachment can be shown. To prove the boundaries of the reserved forest we only depend on local witnesses, and should they even desire to clear the actual Maragala block, it can be done by unanimously giving some fresh name to the piece cleared.

283. *Reservation of no value.*—In the valuable Pallekele forest in the same Province, reserved as No. 19 of the same Proclamation, visited in company with the Assistant Government Agent, we suddenly come on whole hill sides cleared of forest. The entire village of Madahapolakanda, against which now 16 cases, comprising 40 defendants, have been entered, has, on payment of 50 cents per tenement, been allowed to chena without any apparent restriction. The responsible headman, of course, stated at the time that a number of cases were pending against these people, yet it was only two months after our visit that the prosecutions mentioned were commenced. This forest holds, perhaps, finer ebony than any in the Island. Under circumstances such as these, the proclamation of reserved forests is, of course, perfectly useless. It would be far better to bring out all the timber at once, and to store it, than to allow it gradually to be burnt up by the chena cultivator.

284. *The unproclaimed reserves are only pieces of patana or chena land kept for village use.*—Of the unproclaimed reserves, lists are usually kept in most of the Provinces, but there is much confusion between these and the proclaimed reserves. They are generally* pieces of forest or patana reserved for village use. In many districts there are large numbers of these so-called reserves under ten acres, and in the Badulla District alone there are eleven hundred with an average area of 60 acres. No means are ever taken to compare these with the patches of forest in actual existence, and many have been sold or cleared for chenas.

285. *Recapitulation.*—It will be seen, therefore, that there are in several Provinces Reserved Forest Lands proclaimed under the Timber Ordinances. The boundaries are quite undefined, and no special measures have been taken for their protection against illicit felling and encroachments. Also, that there are numerous patches of forest, chena and patana—forming so-called reserves—originally witheld from sale, but of whose existence as Crown land there is now great doubt. All these reserves are so ill-defined, that, although it may be possible in future to form some of them into demarcated reserved forests, it will be necessary first to demarcate them, and to treat them exactly the same as forests which are not reserved.

LAND SALES.

286. *Want of consideration in selling land.*—In connection with this part of the subject, I would briefly draw attention to the ill-considered plan on which land sales have hitherto been conducted, and their prejudicial effect on the timber supply and on the Crown forest revenue. It has been shown elsewhere that the area of Crown land sold between 1833 and 1880 amounted to 1,177,086 acres, the total sum realized being £1,871,689, or an average of over 31*s.* an acre. The system has been to sell to the highest bidder any land applied for, the sale being free of all claims and conditions as to cultivation. No thought was given to climatic reserves until 1873, when, owing to Sir Joseph Hooker's representations, some areas in the Central Province at high elevations were saved. The reservation of forests for fuel or timber has likewise been treated with the same neglect. The principle has been that all considerations must give way, as Sir William Gregory states,† in order to swell the revenue; to allow land in the most accessible places to be sold at the upset price of £1 per acre, when a small portion of the timber repays the cost of the land. We find, in consequence, that the forests in the most favorable position in the Western and Southern Provinces have been bought at the upset price of 5*s.* 3*d.* to £1 an acre, when at the time of purchase the timber alone must have been worth many times the price paid. Within the last few years strips of forest along the navigable streams in the Western Province have been bought solely for the standing timber, the result being that the native timber traders command the market, their forests along the river banks possessing greater facilities of transport than we have in the Crown forests standing further back.

287. Under the system by which land is now sold, from first to last the opinion of the Forester is not called for; it is considered unnecessary to ascertain, by means of a reliable official what effect the sale of the particular block will have on the surrounding land. Whether the land is covered with fine timber forest or low scrub appears to be of no concern, as also whether an isolated block or a part of a large and valuable forest. I believe no measures are taken in the survey to give any but a plan of the block; its relative position to other blocks, to roads, rivers, villages or forests is not shown, nor is the plan accompanied by any report as to the vegetation, soil, standing timber, &c., which the surveyor might easily draw up, so that Government has, in reality, no data as a guide in according or refusing sanction to the sale.

288. *Difficulty in preventing the sale of land.*—To show the facility with which land can be bought even in direct opposition to the authorities, I need only offer two instances. In the Eastern Province, since forest land has been no longer given for chenas, the Mohammedan cultivators have attempted to buy it, ostensibly for paddy cultivation, at the upset price of Rs. 10 an acre. In one case, application was made for a 25-acre block near Pulukanawa tank. A surveyor was sent out, and in addition cut out a 50-acre block in the centre of a large area of

* In cases they are large blocks of forest, such as the large Central Block, and the few other areas unsold at over 5,000 feet elevation, which are held as reserved under instructions conveyed to the Government Agent, Kandy, in Colonial Secretary's letter No. 73 of 3rd February, 1879. Some of these have also been surveyed.

† Sessional Paper No. XIX. of 1873.

virgin forest. Captain Walker, the Forester, happening to meet the surveyor on the spot, and seeing what damage might be caused, was able to get a fair reserve price of Rs. 50 an acre put on the larger block, the natural result being that it was not sold. Similarly, a great deal of forest near Devilané was sold for the upset price, payable in instalments. The three years' rotation of chena crops have been taken off the soil, and it is now covered with illuk grass only, from which fires year after year spread into the surrounding forests.

In the Colombo District, where so little forest remains, it was only by chance that the sale of 700 acres of the best forest near Hanwella could be stopped. Availing himself probably of the temporary absence from the Island of the Hon. F. Saunders, an individual who had previously bought large areas of forest land for the timber only applied for and got this large block surveyed. Had I not chanced to hear it in time to represent matters to the Colonial Secretary, the land would probably have been sold at the upset price, when at the lowest estimate the timber now standing may be valued at Rs. 150 an acre. The opening up of the country is no doubt desirable, but Government cannot be aware at what cost all other considerations are waived, and for how slight a temporary augmentation of revenue the property of the Crown is being so rapidly diminished.

PRESENT FOREST ESTABLISHMENT.

289. *Annual cost of Establishment.*—A detail of the existing establishment is given in the accompanying statement. It will be convenient to divide this into :—

(*a*) The staff chiefly employed on timber works :—

		Rs.
North-Central Province	...	11,680
Eastern Province	...	6,840
Northern Province	...	4,940
North-Western Province	...	4,800
	Rs.	28,260

(*b*) The staff whose chief duty it is to check chena clearings:—

		Rs.
Southern Province	...	2,840
Western do.	...	500
Central do.	...	3,360
	Rs.	6,700

In these the working out of timber is not undertaken. In the Southern Province the Forester's duties are to look after two or three small teak plantations, and to get up prosecutions for unlicensed chena cultivation. In the Western Province this is the duty of the Forester in the Pasdun Kóralé. In the Central Province there are a Forester and two superintendents of minor roads who attempt the same work, the latter receiving Rs. 500 a year for the work in addition to their regular salaries.

(*c*) Railway Fuel Supply ... ... Rs. 4,548*

DETAIL OF FOREST ESTABLISHMENT, 1882.

North-Central Province.

		Rs.
1 Forester	... ...	4,000
1 Assistant Forester	...	3,000
1 Overseer	.. ..	840
1 do.	... ...	600
1 extra Kangani	...	360
2 Peons	... ..	480
Transport—16 coolies	...	2,400
Total ...	Rs.	11,680

Eastern Province.

1 Forester	... ...	4,000
1 Overseer	... ...	740
1 Kangani	.. ...	300
1 do.	... ...	360
1 Peon	... ...	240
Transport—8 coolies	... ...	1,200
Total ...	Rs.	6,840

Northern Province.

1 Forester	... ...	3,500
1 Overseer	... ...	240
Transport—8 coolies	...	1,200
Total ...	Rs.	4,940

North-Western Province.

		Rs
1 Forester	... ...	3,000
Transport	... ...	1,800
Total ...	Rs.	4,800

Southern Province.

1 Forester	... ..	2,000
1 Overseer	... ...	360
Transport—coolies	...	480
Total ...	Rs.	2,840

Western Province.

1 Forester (Pasdun kóralé)	...	500
1 Railway Fuel Supply Superintendent		3,000
1 Overseer	... ...	600
1 Clerk	... ...	600
1 Depôt keeper ...	..	240
1 do. cooly ...	...	108
Total ...	Rs.	4,548

Central Province.

1 Forester (Mátalé)	...	2,360
1 Supervisor (Kandy)	...	500
1 do. (Badulla)	...	500
Total ...	Rs.	3,360

* This amount is paid out of the vote of Rs. 35,000 for felling and buying firewood for the railway.

ABSTRACT.

		Rs.	Rs.	
2 Foresters at Rs. 4,000	...	8,000		
1 do. „ 3,500	...	3,500		
2 do. „ 3,000	..	6,000		
1 do. „ 2,360	..	2,360		
1 do. „ 2,000	...	2,000		
Total annual cost of Superior staff		———	21,860	
8 Overseers	... ...	3,800		
3 Supervisors	... ...	1,500		
3 Peons	... ..	720		
Total annual cost of Subordinate staff		———	6,020	
Transport	... ...	—	7,080	
Total cost of Forest Establishment			———	Rs. 34,960
Do. Railway Fuel Supply			—	„ 4,548

THE FINANCIAL RESULTS OF THE PAST.

290. The question of the general financial results in the past should now be considered. For this purpose figures have been supplied me for the ten years, 1872–81, by the Hon. the Auditor-General, which I have re-arranged.

291. *Share working not shown in the accounts.*—The figures do not, I believe, include any of the results of share working, the practice having been to show in the provincial accounts only the actual *nett* receipts on such transactions. It is important that this should be borne in mind in judging of the comparative results of the different Provinces.

292. *What Provinces have made share payments.*—It will be useful once more to state that the Provinces which have thus made use of the share system are the:—

North-Western, giving	$\frac{1}{2}$ to $\frac{2}{3}$ share of timber $\frac{1}{2}$ to $\frac{2}{3}$ share of sale proceeds	for all kinds of timber;
Eastern, giving	60 per cent. of timber 45 to 50 per cent. of sale proceeds	for dead and dying timber;
North-Central, giving	$\frac{1}{2}$ share of proceeds of sale at fixed prices	for all kinds of timber;
Central, giving	$\frac{1}{2}$ share of timber $\frac{1}{2}$ share of proceeds	for ebony and halmilla.

293. *Financial results where Foresters have been employed on timber works to be considered separately.*—To guage the financial results of forest working since the radical change of stopping the issue of licenses, and the appointment of Foresters specially employed in working out timber on Government account, the four Provinces—North-Western, Eastern, Northern and North-Central—should be distinguished from the other three Provinces, where forest protection has been the principal object. The former therefore appear in the first part of table A. alone.

Timber works on a large scale were commenced in the following years:—

Eastern	Province	..	1874
Northern	do.	...	1876
North-Central	do.	...	1878
North-Western	do.	...	1879

Except in the case of the Eastern Province, Foresters were appointed somewhat earlier, but not till the years mentioned was any considerable quantity of timber worked out.

294. *Interval between the closing of the license system and the appointment of Foresters.*—In 1872 and 1873 in the case of the Eastern and Northern Provinces, and from 1872 to 1876 with the North-Central and North-Western, there was a transition period, few licenses being issued, except in the case of the last named; the revenue, which amounted to Rs. 142,475 for an expenditure of Rs. 17,721—leaving a nett profit of Rs. 124,754—being derived chiefly from sales of stolen timber, royalties, &c.

295. *Results of timber work.*—Taking the Eastern and the Northern Provinces for the eight years, 1874-81, and the North-Western and North-Central for the five years, 1877-81, the gross revenue is Rs. 859,323, the expenditure Rs. 515,215, leaving a nett profit of Rs. 344,108.

In the individual Provinces the nett revenue is:—

		Rs.
Eastern Province, 8 years	...	173,223
Northern do. 8 years	...	142
North-Central Province, 5 years	..	81,597
North-Western do. 5 years	...	89,146

296. *Deductions necessary for shares not shown in accounts.—Statement* C.—This is the result of past work as shown by the accounts, but from the apparent profit of the North-Western and Eastern Provinces, deductions must be made for those payments by share of sale proceeds or of timber which have not appeared in the accounts. For the three years, 1878–80, these amount in the

North-Western Province	to Rs.	78,000
Eastern do. ...	„	74,000
	Rs.	152,000

The amounts of the shares given in the year 1881 have not yet been furnished me. If, however, these figures be correct, and we add Rs. 50,000 as the probable value of the shares given in that year, the sum of Rs. 200,000 has to be deducted from the apparent profit, giving the real surplus as Rs. 144,000.

297. *The shares valued on inexact assumption.*—I am, however, by no means satisfied of the correctness of the figures, either as shown by the accounts, or by the returns of the share contracts sent in by the Foresters. The latter are based on the assumption that after 3,000 tons of ebony are taken out of the forest, payment being made for the work done by handing over 1,500 tons to the contractor, that this timber may be fairly valued at the price Government realizes for its share. Nothing could be more fallacious. A quantity of timber, in excess of the actual requirements of the market, has to be sold to make a certain amount of revenue, and in consequence the market value falls from Rs. 100 to Rs. 50 a ton. Had one-third of the quantity been offered the price would have remained at Rs. 100 a ton. From this Government could have paid the same price—Rs. 25 a ton for felling and transport, and yet have secured the same nett revenue, Rs. 75,000. In a case like this, the returns value the contractor's share (1,500 tons of ebony) at Rs. 50 a ton. This is wrong, for solely in consequence of our forcing the market prices have gone down, and if we wish to estimate the pecuniary cost to Government, we must not only take the actual market value of the half share, but also add to it the loss suffered by the fall in value of the whole quantity.

So far as concerns the loss on each individual transaction; but when we come to compare several, we find that the effect is cumulative—that, having overstocked the market, prices are depressed for some years; the effect of two or three large transactions is felt long after the actual sales have been concluded, and the whole forest capital for the time loses value.

For these reasons the exact value or cost of any past work, in which the share system has been made use of, is most difficult to estimate. This is the more to be regretted, as a Province like the Northern, where all work is done for cash payments, appears at a disadvantage compared with other Provinces.

298. *The Western, Southern and Central Provinces.*—The second part of the same table comprises the Provinces which have not regularly carried out timber works. Beyond the appointment of Foresters or Forest Supervisor, the new system has caused no great change.

The result of the ten years' work has been a nett revenue of Rs. 23,101, viz.:—

Revenue. Rs		Expenditure. Rs.		Profit. Rs.
350,033	...	326,932	...	23,101

To this result the Western Province contributes Rs. 17,362, and the Central Rs. 20,998; in the Southern Province there is a loss on the ten years' work of Rs. 15,249.

In the latter only has the Forester been exclusively employed in protective duties; the only expenditure, besides his salary, has been on teak plantations. In the Western Province part of the revenue is made by supplying firewood to the railway. The greater part of the Central Province revenue has been made in the Mátalé District by share contracts for ebony and halmilla timber, the cost of which does not appear on the expenditure side. The rest of the revenue in these Provinces is realized by the issue of timber licenses to supply local requirements and by the sale of confiscated timber.

299. *Total results for the whole of the Island.*—The last four lines of Statement A. II. show the gross expenditure and revenue for the whole Island, and the annual surplus or deficit. Except in the year 1877, when there was a loss of Rs. 16,056, the forest revenue has always shown a surplus over expenditure. The largest surplus was in 1880—Rs.133,157. In the following year, 1881, it was only Rs. 68,721, this amount being slightly less than that of the first year, 1872, of the decennial period included within the statements.

300. *Analysis of Expenditure.*—In table B. 1 have divided the expenditure under three heads:—

(*a*) Establishments, including salaries and transport charges.

(*b*) Timber works, including all amounts paid for the felling and transport of timber, and other charges.

(*c*) Firewood. This only relates to the Western Province, and the annual revenue from the same source is also given for reference. The salary of the Fuel Superintendent in the Western Province is paid out of the annual vote for the railway fuel supply, and in this particular the return of expenditure on establishments is incomplete.

Cost of Establishments compared with other Expenditure.—In the Provinces where timber works have been carried out the cost of establishments forms 28 per cent. of the gross expenditure. In the Southern and Central Provinces it forms 65 per cent. For the whole of the Island, excluding the Western Province, the forest establishments have cost 52 per cent. of the total outlay.

CONCLUSIONS REGARDING PAST WORK.

301. To sum up the foregoing remarks, it will be seen that forest management has in the past only been a partial success.

The want of a well-organized system of forest administration has made itself felt as regards—

The Area of the Forests and their Condition,

By great destruction through chena cultivation, owing to the absence of a proper law for protecting Crown lands;

By great diminution of area, in the sale of the best forest lands in the most accessible positions at nominal prices, also causing a permanent depreciation in the value of other forest property;

A neglect of all climatic and economic considerations, which point to the formation of proper reserves in the hills and in the low country;

A continuance of the evils of the license system, allowing contractors to cut what and as they liked, and no change in the destructive habit of tapping ebony trees;

An absence of all organized measures of forest improvement, such as thinning, planting, &c.;

(*Financial Success and Economic Working.*)

High working expenses, and absence of any arrangement between the Foresters as regards labour rates, &c.;

The share system, by which the capital required for conducting forest works had to be borrowed by a native at 16 to 20 per cent., instead of being provided by Government from its cash balances, involving extravagant remuneration in kind for work done, great waste of good material in the forest, and in addition affording great openings for theft;

A total disregard of the laws of supply and demand, each Province endeavouring to bring the maximum quantity of wood to market;

Large forced sales without any reserve price; competition between Provinces in having auctions on the same day, &c., &c.;

Over-measurement in making sales;

A neglect to develope the forest resources by bringing new products to market;

An absence of any effectual measures for controlling timber transit, &c.

A.

FOREST REVENUE AND EXPENDITURE, 1872–1881.

I.—*Forest Establishment employed on Timber Works.*

PROVINCES.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	Total.	Result of 10 years' work.
Expenditure.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
North Western ...	30	—	20	2,000	255	4,178	10,236	12,945	8,953	9,881	48,498	—
Eastern ...	5,795	5,091	10,386	6,015	19,777	21,604	23,664	26,313	29,139	30,823	178,007	—
Northern ...	1,093	3,257	11,127	4,407	11,589	19,680	15,824	42,264	16,263	19,034	144,538	—
North-Central ...	—	—	105	—	75	9,778	29,209	57,093	37,955	27,678	161,893	—
Total expenditure	6,918	8,348	21,638	12,422	31,696	54,640	78,933	138,615	92,310	87,416	532,936	—
Revenue.												
North Western ...	29,249	20,051	6,941	4,643	3,405	5,860	10,219	24,645	58,474	36,141	199,628	+151,130
Eastern ...	9,450	4,963	15,134	22,287	31,258	42,057	52,893	45,002	73,428	58,285	354,757	+176,750
Northern ...	23,183	23,995	872	12,937	8,031	7,511	36,107	12,559	28,942	33,371	187,508	+ 42,970
North-Central ...	—	—	12,176	1,502	2,917	16,492	49,443	94,039	57,633	25,703	259,905	+ 98,012
Total revenue	61,882	49,009	35,123	41,369	45,611	71,920	148,662	176,245	218,477	153,500	1,001,798	—
Year's working { Loss ...	—	—	—	—	—	—	—	—	—	—	—	—
Year's working { Profit ...	54,964	40,661	13,485	28,947	13,915	17,280	69,729	37,630	126,167	66,084	—	+468,862

II.—*Forest Establishment employed chiefly on Protective Duties.*

Expenditure.												
Western ...	73	1,454	1,008	728	803	42,140	63,538	45,940	47,782	57,681	261,147	—
Southern ...	108	2,545	6,720	5,591	1,589	2,590	3,180	3,098	3,813	3,875	33,109	—
Central ...	—	—	—	—	4,429	3,794	12,144	3,848	4,150	4,311	32,676	—
Total expenditure	181	3,999	7,728	6,319	6,821	48,524	78,862	52,886	55,745	65,867	326,932	—
Revenue.												
Western ...	3,836	2,600	3,551	8,453	33,574	13,028	39,938	57,975	58,637	56,917	278,509	+ 17,362
Southern ...	1,839	2,921	3,982	1,025	1,113	981	2,519	1,248	1,457	775	17,860	— 15,249
Central ...	8,821	2,507	4,891	2,080	3,030	1,179	14,580	3,123	2,641	10,812	53,664	+ 20,988
Total revenue	14,496	8,028	12,424	11,558	37,717	15,188	57,037	62,346	62,735	68,504	350,033	—
Year's working { Loss ...	—	—	—	—	—	33,356	21,825	—	—	—	—	—
Year's working { Profit ...	14,315	4,029	4,696	5,239	30,896	—	—	9,460	6,990	2,637	—	+ 23,101
Grand Total { Expenditure	7,099	12,347	29,366	18,741	38,517	103,164	157,795	191,501	148,055	153,283	859,868	—
Grand Total { Revenue ...	76,378	57,037	47,547	52,927	83,328	87,108	205,699	238,591	281,212	222,004	1,351,831	—
Grand Total { Loss ...	—	—	—	—	—	16,056	—	—	—	—	—	—
Grand Total { Profit ...	69,279	44,690	18,181	34,186	44,811	—	47,904	47,090	133,157	68,721	—	+491,963

B.

STATEMENT showing the Annual Provincial Expenditure on Establishment, Timber Works, and Firewood—1872 to 1881.

(a).—Expenditure on Establishments.

YEAR.	North-Western Province.	Eastern Province.	Northern Province	North-Central Province.	Total.	Western Province.	Southern Province.	Central Province.	Total.	Grand Total.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1873	—	2,125	—	—	2,125	500	—	—	500	2,625
1874	—	4,500	4,500	—	9,000	124	4,420	—	4,544	13,544
1875	—	4,500	4,011	—	8,511	—	4,000	—	4,000	12,511
1876	—	7,287	4,500	—	11,787	—	914	3,360	4,274	16,061
1877	3,674	4,491	4,500	2,283	14,948	—	970	3,360	4,330	19,278
1878	3,000	4,666	4,500	3,999	16,165	— *	1,470	3,360	4,830	20,995
1879	5,013	7,956	6,452	7,161	26,582	—	3,098	3,360	6,458	33,040
1880	5,265	7,579	6,568	14,038	32,450	—	3,813	3,964	7,777	41,227
1881	5,427	7,787	6,409	14,049	33,672	—	3,875	3,957	7,832	41,504
Rs.	22,379	50,891	41,440	41,530	156,240	624	22,560	21,361	44,545	200,785

(b).—Expenditure on Timber and other Works.

1872	30	5,795	1,093	—	6,918	73	108	—	181	7,099
1873	—	2,966	3,257	—	6,223	954	2,545	—	3,499	9,722
1874	20	5,886	6,627	105	12,638	884	2,300	—	3,184	15,822
1875	2,000	1,515	396	—	3,911	729	1,591	—	2,320	6,231
1876	255	12,490	7,089	75	19,909	803	675	1,069	2,547	22,456
1877	504	16,513	15,180	7,495	39,692	42,140	1,620	434	44,194	83,886
1878	7,236	18,998	11,[illegible]24	25,210	62,768	10,579	1,710	8,784	21,073	83,841
1879	7,932	18,357	35,812	49,932	112,033	7,338	—	488	7,826	119,859
1880	3,688	21,560	9,695	23,917	58,860	5,026	— †	186	5,212	64,072
1881	4,454	23,036	12,625	13,629	53,744	11,089	—	354	11,443	65,187
Rs	26,118	127,116	103,098	120,363	376,696	79,615	10,549	11,315	101,479	478,175

(c).—Expenditure on Firewood Supply.

	1877.	1878.	1879.	1880.	1881.					
		Rs.	Rs.	Rs.	Rs.				Rs.	Rs.
Western Province ...	—	52,959	38,602	42,756	46,591	—	—	—	—	180,908
Revenue from Firewood Rs.	—	30,981	56,613	53,006	48,639	Total receipts from firewood			188,639	—
								Grand total expenditure...Rs		859,868

* The cost of Establishment is debited under the head of Timber Works.
† The expenditure on teak plantations should appear here.

C.

STATEMENT showing value of payments on account of Share Contracts.

	PAYMENT.					
	By share of Timber. (Estimated Value)			By share of Sale Proceeds. (Actual Cash Payment.)		
	1878.	1879.	1880.	1878.	1879.	1880.
EASTERN PROVINCE.	Rs.	Rs.	Rs.	Rs	Rs.	Rs.
Ebony	—	—	—	-	4,861	5,810
Palé	—	—	—	—	609	8,056
Dead timber	18,487	20,853	15,658	—	—	—
	18,487	20,853	15,658	—	5,470	13,866
	Total three years . Rs.		54,998	Total three years...Rs.		19,336
NORTH-WESTERN PROVINCE.						
Satin	—	—	673	—	—	—
Ebony	—	4,070	9,382	—	2,950	30,252
Halmilla	—	—	4,929	—	—	—
Palé	—	—	667	—	—	—
Dead timber	—	7,694	3,662	11,552	—	—
Tammana	—	2,364	—	—	—	—
	—	14,128	19,313	11,552	2,950	30,252
	Total three years.....Rs.		33,441	Total three years ...Rs.		44,754
	Total value of timber Rs.		88,439	Total sale proceeds Rs.		64,090

Total amount not appearing in accounts, Rs. 152,529. The returns from the other Provinces are incomplete, and the amounts consequently cannot be shown.

PART II.

FUTURE MANAGEMENT AND WORKING.

CHAPTER V.

INTRODUCTORY.

1. HAVING explained the general conditions of forest distribution and past management, it will now be necessary to consider what steps should be taken by Government to place forest administration on a footing which will result in full justice being done to the resources of the enormous State forests. The remarks that I have to make may be conveniently grouped under the following heads :—

(*a*) LEGISLATION. The existing laws regarding the Crown forest and waste lands. The legislative assistance required for the protection of the forests.

(*b*) THE CONSTITUTION OF THE FOREST AREA. Its sub-division into reserved forests, &c., to provide for more effective protection and management. The sale of forest lands, &c.

(*c*) THE ORGANIZATION OF THE STAFF entrusted with the management of the forests.

(*d*) THE WORKING OF THE FORESTS. The working out and sale of forest products.

(*e*) PROTECTION AND IMPROVEMENT. The prevention of encroachments and the artificial means to be adopted for assisting the natural reproductive process.

(*f*) THE RAILWAY FUEL AND SLEEPER SUPPLY.

2. *Reason for reviewing past work at such length.—Explanation of the comparative want of success.*—The notice of past work has been extended to greater length than it would otherwise merit, in order to discover the errors of the past, and to give substantial reasons for the want of success. We have seen the most wasteful of all—the license system—succeeded with little real benefit by work under Government agency, and as the latter must in principle, although not in practice, I trust, be the one for future adoption, it appeared advisable, before definitely offering advice as to any future course of action, to see why arrangements, so successful elsewhere, have failed in Ceylon.

Had there been no apparent cause for these unfavourable results, it would have been necessary to suggest some radical change in the management of Crown forest properties. But it is scarcely necessary to observe, that unless work is carried on in a methodical practical way, it is useless to expect success. A general want of system appears to have been the sole cause of general failure, for when, as in the case of the Eastern Province, systematic work has been carried through year after year, we find that the Forester has continued, notwithstanding the general fall in prices, to show good results, not only judging by the accounts—for that alone is no test—but results such as will bear looking into. The want of system has, of course, been aggravated by the inexperience of many of the officers, but it alone, including the total absence of reliable supervision, is chiefly to blame. When merit is judged entirely by the amount of net revenue made, without any searching enquiry as to the cost, it is not likely that any one in temporary employ will risk his reputation by spending money on planting, &c., or on any other work not bringing in immediate returns.

3. *Defective general management of the Crown lands and absence of a proper law.*—So far as concerns the mere commercial details of forest working, and the utilization of forest products, in which the Foresters have been chiefly employed. But when we examine the management of the State forest properties as a whole, we shall find the same want of an organised system. Unsupported by an efficient law little can be done, so that there is perhaps little reason for surprise at organization being so backward, when the protection of the Crown rights in the forests and waste lands of the Colony is so difficult. The penal clauses of the law for preventing trespass and the cultivation of Crown land, owing to the difficulties connected with their application, are practically invalid; Ordinance No. 12 of 1840, although it claimed on behalf of the Crown all waste and uncultivated land, offered facilities for acquiring proprietary rights, which now prove most injurious. With a proper land revenue system this could not be, but when cultivation is allowed without a permit, and legal title to land can be claimed by the production of a revenue receipt signed by a subordinate village official, the Crown tenure can only be precarious, especially when a variety of communal rights and land claims, based on old Dutch or Sinhalese title deeds, &c., remain unrecorded and unsettled.

Again, the provisions of the Forest Law or Crown Timber Ordinance as regards the clearing of forest land, timber transit, and thefts of forest produce, cannot be enforced with any certainty, and rights to forest produce have grown up which are at variance with the expressed intention of the Legislature in enacting the Ordinance.

4. *Effect of Forest destruction.*—Before entering on the scheme which I shall recommend for future adoption, it will be well to state briefly the position we are in, and the objects of forest management in Ceylon. I need not expatiate on the importance to the country generally of a good forest administration, of the advantages of an adequate supply of timber, fuel, fence material,

&c., nor on the general climatic influence of forests and the effect they have on our springs and rivers. Because, in a climate so favorable, all vegetation does not die out, leaving a bare soil, devastations have in the past attracted less attention than if they had been as injurious as in the Mauritius or the West Indian Islands. But as population advances, the character of the vegetation rapidly changes, the chena cultivator comes in and lays waste thousands of acres. After one crop the land is abandoned, and lantana, batali, illuk-grass, or other rank growth covers the ground, to be replaced only after a long interval of perhaps 100 years, supposing the soil continues undisturbed, with signs of the original forest. Although the climatic effects are not so marked in Ceylon as elsewhere, the productiveness and economic value of the soil are as completely ruined. The character of the vegetation becomes quite inconsistent with a permanent and increasing supply of timber and other forest products. Finally, it should be remembered by those who congratulate themselves that the clearing of forests—in Ceylon at least—has had no marked influence, that the effects of forest destruction do not always make themselves immediately apparent. Although they are as yet inappreciable, it by no means follows that they do not exist. It is most unlikely that Ceylon can prove an exception to the general rule, and that forest clearings—probably nowhere equalled in rapidity of execution and in extent, with so small a population—can be unattended sooner or later by some distinct climatic influence.

5. *The great extent of forest likely to mislead.*—When there is much waste land in a country like Ceylon, where large areas are difficult of access, it is easy to be misled by indefinite vague ideas, or by the term "inexhaustible forests," and other similar expressions, which have always proved so delusive. In Ceylon such delusions have been assisted by the vitality of the natural vegetation, and probably to this cause is, in a great measure, due the apathy with which the continued destruction of forest has been regarded. Unprofessional persons travelling along the main roads have been misled by the fact, that they always pass through what is apparently young forest vegetation, yet really chena scrub, and by the statements of others, who should be well informed, talking of places such as the "virgin forests" of Bintenna* or of Padivil, when the first are nothing but a vast chena, and the latter were worked out by the traders many years ago. People forget, too, that all jungle is not timber forest. Because, by wandering here and there over a large area, a Forester is able to secure some fine ebony or satinwood, conclusions are drawn as to the quantity of timber left, which can safely only be based on the most careful and detailed examination of the forests. The permanent settlement of the question is then likely to be compromised for one, that at slight apparent cost, brings in large returns of a temporary nature.

6. *General indifference as to the future.*—Those who do not want the trouble of working out the problem satisfy themselves readily that there are grounds for security in the present state of things; but we may fairly ask ourselves:—If the protection of the reduced area of forest is left to the present law and system, how long will the forests last? We hear of chena cultivation being stopped, but judging from personal observation and from the Blue Books, it would not appear to have been even materially checked except in the Eastern Province. As to this, however, we may differ, but if we cross over to Madras we see, even when the law provides the revenue officer with effective legal means for stopping clearings, and where no cultivation can be carried on without a "patta" or permit, that in the absence of a proper forest system, the forests are in many parts being rapidly cleared away by the kumri cultivator. How then in Ceylon, under conditions exactly the reverse, and where, moreover, judicial and administrative functions are not combined in the same officer, can we hope permanently to stop the clearing of forest land. It has no doubt been checked in certain parts, but this is entirely owing to the personal exertions and sympathies of the district officer. He may be succeeded by someone of a different opinion as to its injurious effects, or who will not care to risk unpopularity, or, after being held in check for years there may be, as not unfrequently occurs in Ceylon, an alarm of famine. Chena permits are then issued broadcast, and the people resenting the restrictions to which they have been subject, do more harm in six months than they would otherwise have done in as many years.

7. *The supply of timber available much overrated.*—The delusion also exists that the area of timber forest being so vast, the supply of timber will in any case outlast the present generation; that, as at the moment the finances of the Island do not admit of any very large expenditure, we should put up with some temporary makeshift, instead of having a properly organized forest system. Now, so far from the first being the case, it may easily be shown by considering the wants of the Railway and the Public Works Department, that the forests can barely satisfy the present demands, and that the distance-from-the-sea-board limit may soon be reached, at which foreign timber will in Ceylon itself, and in Madras, compete successfully with that grown in the Island, for to whatever market we look, the Indian or the local one, we see that all our best timbers have to be brought out by expensive land transport to compete with teak and other foreign woods, for which there is cheap sea carriage.

8. *Supply of Satinwood insufficient for Railway sleepers.*—Satinwood sleepers are the most durable. Of these, 30,000 to 45,000 are required annually for the railway, or about 100,000 cubic feet of timber. If we can supply them, as a satinwood sleeper outlasts two to three of the creosoted pine, it means a considerable saving. To cut 30,000 satinwood sleepers (requiring 6,000 trees†) annually from the forest would at present mean the speedy extermination of the tree, although when the forests are so large, 6,000 stems a-year of our principal timber is no exorbitant demand.

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* In the Central Province; part of what is popularly known as Bintenna is the Pallé Paláta of the Eastern Province.

† This estimate of five sleepers to a tree might appear low, but with trees of a small girth and crooked growth, the average outturn is not likely to be higher. I should also hesitate before recommending that even 2,000 trees a year be cut for sleepers.

9. *The Public Works Department can only be supplied at great cost.*—Again, in the Southern and Western Provinces, timber required by the Public Works Department has to be brought from Trincomalee or Batticaloa on the opposite side of the Island, and only recently satinwood for planking the Katugastota bridge, near Kandy, had to be brought round the Island from Alut-oya, 40 miles inland from Trincomalee, the original value of the timber having probably trebled before it reached Kandy.

10. *The competition between Island-grown and imported timber.*—The question of how long Ceylon timber can compete with foreign in the local market is also not reassuring. Teak has already taken the place of halmilla for oil-cask staves, not because it is better, but because it can be bought as cheap and easier. Teak is also preferred to satinwood for building, and the greater the cost of procuring the latter, the less chance will it stand in the local competition.

11. *Proper Forest Management not antagonistic to the development of the country.*—We hear, too, of the importance of making room for increasing population, of encouraging the planting enterprises, and some oppose the introduction of a proper forest system on these grounds, entirely forgetting that efficient forest conservancy is not directed to restricting the fullest extensions of coffee planting or of any other form of permanent cultivation, but is rather intended to benefit the population which must spring up from the resources of the Island being developed. As soon as genuine efforts are made to open up the country, forest management restricts itself to the areas absolutely necessary for maintaining a supply of timber sufficient for the population. In the meanwhile it endeavours to protect the Crown lands against indiscriminate clearing, which renders the soil for ever valueless for any form of permanent cultivation.

12. *Effect of not protecting the forests. No more land suitable for coffee is available.*—Where there is no effective forest conservancy, increasing population soon finds that there are no forests to supply its wants, or that there is no soil suitable for the extension of cultivation. The latter may be said already to be the case in Ceylon, for I may say with absolute correctness, that unless the reserves at over 5,000 feet elevation are encroached on, there is no forest land between 2,000 to 5,000 feet left for capital to open out. And why? Because chena clearings have swallowed up all the forests which were not in times past required for immediate sale. It is not that all the forest has been cleared for coffee, and that thus the enterprise has found its own limits, but large though the extent of coffee estates is, the map shows what immense areas, now only covered with lantana, would be available for fresh development of the enterprise had any foresight or care been shown in preventing forest destruction. It is not a mere matter of opinion, but one that is repeatedly confirmed by officials and official documents, that, owing to the apathy of Government, various claims, such as those put forward under tombu register extracts or under old sannas; also to rights of paddy land appurtenances, to communal rights, to proprietary and occupancy rights under Ordinance No. 12 of 1840, &c., have been allowed to exist unrecorded and undefined. Under color of these claims, people have been permitted unquestioned to devastate vast areas of the finest forest, not only in the Central Province, but throughout the moist zone. In some places, I am informed, the forest cleared has been land that Europeans had applied for, and which was about to be surveyed for sale. Having a detail survey of the Central Province* we can estimate accurately what small areas of forest are left uncleared, and what large ones are only covered with chena scrub.

If matters have arrived at such a crisis with what nearest concerns the planting interests, that have been everything for Ceylon, and on which everything in the Island hinges, it would be useless to expect the protection of Crown lands to have met with greater attention in other parts of the Island. Areas of forest are still left in the moist zone, but when we come to select our reserves for the small local consumption of soft-woods and fuel, we shall find that little is available in suitable situations, those forests best situated having been sold or cleared, and that to secure the small quantity of fuel required for our railway, artificial plantations have to be made.

13. *Object of Forest Conservancy.*—The primary object of forest conservancy everywhere is, by the formation of large State forest domains to maintain a certain area of the country under forest, both for the sake of its climatic influence and for the material benefits to be derived by the use of its products. The maintenance of a constant supply of timber and firewood is of great importance, but in Ceylon, where the local consumption is small, it is by no means the only object to be considered in the future; the area of forest might in some parts be still further reduced, if at the same time we could offer permanent protection to our best timber-producing tracts—which we cannot do under the existing laws,—and in these go to some expense and trouble in improving the forest growth, without the local supply—I do not say at cheap rates—being greatly jeopardised.

14. *The general management of uncultivated Crown lands requires to be organized.*—The formation of State forest domains is a most important work, but the question which appears to require the immediate attention of Government is of far wider scope, and one that concerns the general welfare of the Colony far more closely. The former is but of small importance compared with an organized system for the management of all uncultivated land belonging to the Crown.

This may really be called the forest question of Ceylon. The position may be described in a few words.

15. *Reduction of forest area by chena cultivation and by land sales.*—The area of waste lands is very large; the spread of permanent cultivation is slow, whilst chena cultivation, which pays in revenue not one-hundredth part of the value of the timber it destroys, threatens to swallow up all the remaining forests. If this destruction can be checked, the natural forest products

* The map is not published with this report. To any one wishing to realize how far forest destruction and the alienation of Crown property has gone, I would recommend an inspection of the map at the Surveyor-General's Office; all the lithographed sheets are for the first time mounted together, the uncleared forest being colored red.

can be utilized until such time as the land is required for cultivation, and considerable revenue, largely in excess of any dry grain tax, can be realized without in any way deteriorating the soil or its sale value.

The forest area and the value of the forest properties are liable to further diminution from the fact that anyone may select and buy the forests best situated, the result being that timber from the latter undersells that brought out by Government agency from those less accessible, and renders the latter for the time being valueless. The price received for the land sold is quite nominal, although the loss of forest revenue which results is very large.

16. *Questions to be answered before our future course of action is decided on.*—There are other points in connection with the management of waste lands, but these are the most important, and the main questions appear to be: (1) Can we keep chena cultivation within bounds? Is the Legislature prepared to make laws prohibiting the unauthorized cultivation of Crown lands? (2) Is the Executive Government, in order to protect the Crown forest revenue, prepared to exercise judicious control over the sale of Crown lands, not giving everyone the right of free selection whether he means to buy for cultivation or for the sale of timber?

As long as it is open to everyone—except he be a European, and so not likely to escape the consequences of a criminal or civil action—to destroy in a few months, without receiving adequate punishment, forests that we have been carefully protecting for years, and unless we are sure that, after spending money on forest conservancy, our best forests will neither be cleared, bought at a nominal price by some one anxious to clear out the timber which we ourselves have been carefully growing at great cost,* nor the value of their produce suddenly reduced by the sale of other forests to timber dealers, there can be little talk of systematic forest management, which is expected to pay its way.

17. *Necessity of a law for controlling chena cultivation.*—The rules under which Crown land is sold in future must rest of course with the Executive Government, but the primary necessity in the interests of the Colony, apart from all thoughts of forest revenue, is the provision of legal means by which the State can effectually stop all new chena clearings—a law which will constitute the unauthorized clearing and cultivation of Crown land a criminal offence, whatever the surface vegetation.† If the revenue officers are not provided with this legal power for the protection of Crown lands, the forests must gradually decrease and become valueless to every one. Having the assistance of the law, and feeling our position secure, we may freely develop the resources of the valuable property which Ceylon has in her forests, and adopt such measures as are best calculated to increase their permanent value to the country.

18. *The interests of future generations protected, whilst greater facilities are offered for the purchase of land.*—The interests of future generations will be secured by the preservation of all forest land which is not at the moment required for legitimate cultivation. The full development of the country will not suffer, for by taking adequate measures for protecting the forest revenue, and having selected such areas as we wish to retain permanently for the timber and fuel supply, we shall know that the future is provided for, and as all land cleared will be applied to a legitimate purpose, it will be possible to allow far greater freedom of selection than at present. In the meanwhile, under careful conservancy and management, the uncultivated lands in the Colony will daily improve in value and be developed into a valuable property.

19. *Favorable prospects.*—The position is by no means an unfavorable one, and maltreated though the forests have been in the past, there is every reason for expecting, if based on the same principles which have led to success elsewhere, systematic management is at once introduced and energetically carried through, the forests in future will not only become of great benefit to the Colony, but a valuable and increasing source of considerable revenue. For this, however, there must be a radical *change of system*—or rather, *system* must take the place of *disorder;* half-measures are useless, and although every change must be carefully introduced and adopted to special local circumstances, all must form part of a well-considered general plan. Having once determined on the latter, it must be kept to and systematically developed throughout the Colony.

20. *Effect of past errors.*—For some time we shall have to make up for all former mistakes, and the financial results may for this reason not immediately show a large surplus, and this indeed, it would be useless to expect, when artificial reproductive measures, which have been entirely neglected as yet, have also to be paid for. But gradually, when the entire forest resources have been developed, prospects will improve, and we may in the meanwhile rest assured that, instead of as at present living on our capital, the productiveness of the forest will be daily increasing, while its area is carefully guarded against further diminution; that we are no longer taking out of the forest more than nature replaces, whilst the area itself is being rapidly diminished.

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* This is no extravagant assumption. Some of the old Dutch plantations in the Western Province, which held a good deal of valuable timber, have been sold. In the Southern Province an old teak plantation is leased for chena cultivation.

† In the past it appears to have been held that by issuing and periodically repeating an order prohibiting chena cultivation, the difficulty would be solved. When, according to the Blue Book, out of a cultivated area of 700,000 acres in 1881, 150,000 acres are said to have been under dry-grain crops, the impossibility of suddenly enforcing compliance with such an order will be recognised. If paddy cultivation is extended, if greater facilities are offered and the tax on paddy cultivation made light compared with the dry-grain demand, chenas would no doubt gradually decrease. All we can do is to discourage the one and assist the other.

It will be as well here to state that the effectual control of chena cultivation, not its prohibition, is aimed at. No interference is desired with private rights or rights acquired under the existing laws. All we aim at is the protection of the Crown properties in the interests of all. It has long been evident that the power of the administrative officer is quite nominal, whilst chena cultivation is only a legal offence when it can be proved that a satinwood, ebony or other valuable tree has been cut. It is necessary instead that he should have the means of punishing not only the felling of certain trees, an act which constitutes only temporary injury, but that also the real injury—the clearing, burning and cultivation, or the breaking up of the soil—should, *if unauthorized*, constitute the punishable offence.

CHAPTER VI.

LEGISLATION.

21. Before entering into the question of future forest management in Ceylon, it will be necessary to notice the laws regarding the Crown properties. It is of course beyond the limits of this report to go fully into the question of land-tenures and legislation relating to land, but it may be useful here to draw attention to the subject, especially when it will concern the settlement of the forest question so closely.

22. *Ordinance No.* 12 *of* 1840.—The principal Ordinance defining the rights of the Crown is Ordinance 12 of 1840. Under this, all forest, waste, or unoccupied land is presumed to be the property of the Crown, unless the contrary be proved. All land, not belonging to the Crown, is held in proprietary right, with the exception of certain service-tenure lands in the Kandyan districts, where also certain village chena lands, which were originally the joint property of the village community, have now been more or less divided amongst the individual shareholders.

23. *How land may be acquired.*—The ownership of land may be claimed under:

(*a*) "Sannas" (sanad): the title deed of a grant made by the former Sinhalese rulers.

(*b*) "Tombu register extract": This, in the case of paddy land, is a copy of the entry in the old Dutch revenue record, certifying that the person named is the grantee of a certain area, and that revenue has been paid thereon. In the case of high land, it is often spoken of as a "labena," *i.e.*, a grant of land usually accompanied by a condition that a certain portion, under pain of forfeiture, shall be brought into cultivation within a fixed time.

(*c*) Purchase or grant from the British Government.

(*d*) Thirty years' undisputed possession.

(*e*) Proof that some tax or service has been rendered within twenty years.*

Further, a person in uninterrupted possession for more than ten, and less than thirty years, of any cultivated, planted, or improved land, may, on payment to the Crown of half the improved value, claim ownership.

There are, therefore, a great variety of ways by which titles, adverse to that of the Crown, may be set up. I have already mentioned that there is no regular land-revenue settlement, at which the ownership of all land would have to be investigated and recorded; a compulsory registration of all titles, other than those acquired by purchase since 1833, is also wanting, so that, under these circumstances, the proprietorship of a good deal of land is somewhat uncertain.

Of land sold since 1833 a survey has always been made, a plan being attached to the title deeds filed in the Land Registrar's Office. But of sales previous to 1833, and of all grants made by former rulers of Ceylon, there are no complete records; advantage is taken of their absence by the production of many spurious title deeds or "sannas," written usually on copper or on palm-leaf olas.

24. *The chief difficulties connected with the protection of Crown land.*—These forgeries do not, however, affect the Crown land so much as the tombu register extracts and the proprietary rights acquired, under the Ordinance just alluded to, by short occupancy, or by proof of payment of a customary tax or service. The Dutch, in their coast settlements, anxious to conciliate the people of the interior, distributed tombu extracts wholesale, purporting to give the grantee exclusive rights over large areas of highland. The grant specified the locality generally, only defining the boundaries very roughly; the area was given in kurunies of sowing extent, this being a very fruitful cause of dispute when the grain is not named. Unreasonable though these extracts are, after they have once been admitted to confer proprietary rights, when we wish to prosecute a man for clearing forest in the Southern Province, we find the defendant usually claiming the land as private property under tombu extract.

The same difficulty meets us in regulating the proprietary rights conferred by occupancy or by payment of some tax within twenty years. The taxes are levied through a subordinate headman, who gives a receipt purporting to say that chena tax has been paid on the land called A; this is a purely general local name, applicable to perhaps the whole of the waste surrounding the village, or it may be the name of a forest in which the man has made a small illicit clearing. Subsequently, when we come to prosecute, we are met by a private claim to the land, which, supported by the revenue-receipt as a proof that the customary tax was paid, is upheld by the courts, and the Crown is referred to a civil action for compensation. In both these cases the native will admit out of court that he has only the right to cultivate a small part of the area, and he is then willing to come to an equitable settlement; but in court, when he has once had to mortgage his paddy land to pay the proctor, he says to the Crown authorities: "Prove that the plot now cleared is not comprised within the general local name given."

Protecting the interests of the Crown under these circumstances is of course most difficult, and I have ventured to give this incomplete sketch in order to show how precarious the tenure of Crown lands is, and must be, until a general settlement of all titles and claims is made by the proper revenue authorities, and until some modification is made in the existing law (Ordinance 12 of 1840) giving squatters such facilities for acquiring occupancy rights and title. The claims under genuine old sannas or tombu extract grants now stand side by side with the spurious ones which are manufactured every day, and we still allow people, by the easy means of bribing a petty headman and causing him to inscribe their names in a receipt, to acquire legitimate proprietary rights over large areas of most valuable Crown land. This goes so far that when we want to sell Crown land, as in the chena survey of the Kégalla District, we find it honey-combed by plots of

* This applies to the Kandyan districts only.

land claimed in individual right, rendering the whole practically worthless for State purposes and unsaleable.

25. At the outset, therefore, we are embarrassed by finding the area of the forest and waste lands, of most uncertain tenure, although belonging nominally to the Crown. The area is daily being still further encroached on under cover of the existing land laws, in total disregard of the interests of the Colony, and this will be one of the main difficulties we shall encounter in introducing proper forest management:—How to secure our forest areas from further alienation?

Whatever line future forest legislation takes, it must to a great extent differ in principle from that existing, which recognizes no penal offence in the unauthorized cultivation of Crown land, and which, provided a man has once within the last 20 years paid the dry grain tax on the land, give him either occupancy or proprietary rights.* From the moment that the principle obtains, that it is undesirable for any forest land to be cleared without permission, the existing land laws will have to be altered, and simultaneously the system by which the cultivation of Crown lands is controlled.

26. *Sales of Crown land.*—The sales of Crown lands are conducted by the provincial revenue authorities, a large staff of surveyors, directed by the Surveyor-General, being employed in surveying such lots as may be applied for, or such as the Government Agents may wish sold. The provisions of Ordinance 12 of 1840, giving a right of occupancy after ten years,' and of ownership after thirty years' occupation—the latter being often held to mean the planting of a few cocoanut trees—make it of importance to survey all new encroachments and settlements before any rights adverse to those of the Crown have accrued. But in any case the tenure of waste lands on the part of the Crown can only be somewhat insecure when squatters so early acquire a right of possession, and squatting on Crown land is no legal offence; also, when the protection of Crown property depends on the vigilance of surveyors and village headmen, without the assistance of any connected survey.

27. *Forest regulations under the Dutch.*—Under the Dutch Government certain very stringent forest regulations were in force, the main object of which was rather the protection of the Crown cinnamon monopoly and of teak trees. Cinnamon was in those days grown in the forests. The teak tree was introduced about A.D. 1680 from the Malabar Coast, and all trees belonged to the Government, whether in Crown or private land. It thus became, as in Burmah, a "Royal tree," and had not this regulation been repealed under British rule, teak would be much commoner than it now is.

28. *First Timber Ordinances, 1822 and 1848.*—Under the British rule the earliest regulation respecting the cutting of timber was Ordinance 2 of 1822, prohibiting the cutting of all building timber on Crown land, and of jak trees on private land, without a license. In the former case, a royalty of 1-10th, and on the jak trees 1-8th the value had to be paid to the Crown. Part of this Ordinance was repealed in 1833, and in 1848 Ordinance No. 24 was passed to regulate the felling and removal of timber growing on Crown land.

29. *Crown Timber Ordinance, 1878.*—In 1878 the present Crown Timber Ordinance (No. 6 of 1878) was passed, repealing Ordinances No. 24 of 1848 and No. 4 of 1864. A copy is attached to this report. The following are its principal provisions:—

Definitions.—Section 4 defines "trees" to mean any of the trees mentioned in schedule A. at any stage of their growth, and "timber" to mean the timber of such trees. Power is given to the Governor, with the advice of the Executive Council, to amend this schedule.

No timber to be felled without permit.—Sections 5 to 7 provide that no "timber" shall be felled on Crown land without a permit from the Government Agent, specifying the number of trees, the place of felling, &c., and on payment of such money or share of timber as the Government Agent may direct. The permit is to be addressed to the headman of the place where the forest is situated, and shall be presented to him with a list of the permit—holder's servants. The timber is not to be removed without inspection by the headman, who, if the timber is conformable to the license, shall stamp or mark the timber, and grant a permit for removal, sending a duplicate copy to the Government Agent.

Penalties.—Section 8 provides penalties for a breach of the rules.

Private timber.—Section 9 prohibits the removal of timber from private land without a permit issued by the Government Agent or other person appointed by him. The permit is to be as near as is material to schedule D. The latter specifies the place whence the timber is to be removed and where it is to be taken, the time allowed for removal, and the quantity of timber. Penalties for non-observance of this rule are also provided. The stamping of the timber is *not* provided for.

Powers of arrest without warrant.—Section 10 allows headmen, foresters, &c., to arrest persons found destroying, felling, and removing trees on or from Crown land.

Neglect of duty, &c.—Sections 11 and 12 provide a penalty for neglect of duty by headmen, and for forging a license.

Onus of proof.—Under sections 13 and 14, in any prosecution, the onus of proving possession of license, and of proving that the timber in dispute was not felled on Crown land, lies on the accused.

Informer's share.—Section 15 provides for an informer's half-share of the fine.

Section 16.—Limitation clause.

Timber for agricultural purposes exempted.—Proclamation of Reserved Forest Lands.—Under section 17, any timber cut for agricultural implements is exempted from the provisions of

* In Burmah the status of a landholder can only be acquired in respect to paddy land by twelve years' continuous possession and payment of revenue; as regards "toungya," or chenas, no proprietary rights over land can be acquired by length of possession or otherwise.

this Ordinance. It is also provided that the Governor, with the advice of the Executive Council, may proclaim in the "Government Gazette" *any Crown land to be reserved forest land*, within the limits of which no wood shall be cut or removed for any purpose whatsoever. Also to set apart by Proclamation any tracts of Crown land, within which the wood of such trees as are specially mentioned in the Proclamation, shall not be cut for agricultural implements.

Earlier Reserves.—Under section 18, the reserved forests proclaimed under Ordinance 24 of 1848 are to continue reserved.

Offences in reserved forests.—Section 19 provides the same penalty for felling timber on reserved forest land as on other Crown lands.

Schedule.—Schedule A. contains the names of 66 trees growing in all parts of the Island.

30. *Difference between the repealed and the current Timber Ordinance.*—The principle of this Timber Ordinance differs from that of 1848 in reserving only the 66 trees mentioned in the schedule, instead of declaring the unlicensed cutting of all trees (except for certain purposes) to be illegal. Under the earlier Act, persons cutting timber for any purpose other than for firewood, fencing, or agricultural implements could be prosecuted, whereas under the present Ordinance it is lawful, in the absence of any law prohibiting the cutting of timber or produce from Crown land generally, for any person to fell and remove any and all of the woods not included in the schedule.

31. *Explanation of Queen's Advocate in introducing the Crown Timber Ordinance.*—The object of Government in amending the Timber Ordinance will be best explained by quoting the following extracts* from the speech of the Queen's Advocate in introducing the Ordinance before the Legislative Council :—

"The necessity for amending the law had been demonstrated by recent decisions of the Supreme Court, which had shown that the law as it existed now was quite inadequate for the protection of timber trees grown in Crown forests. There were two processes by which many Crown forests had been denuded for the best part of their valuable timber—the one was the illicit felling of timber for the purposes of sale and removal; the other was the illicit cultivation of Crown forests for the purpose of a temporary crop, during the process of which cultivation valuable trees were burnt and destroyed. Illicit felling for the purpose of sale or removal was punishable under the existing law, but the Supreme Court had held, that where the timber was destroyed as part of the process of cultivating land, such destruction was not punishable either under the "Malicious Injuries Ordinance" or under the existing Timber Ordinance No. 24 of 1848. Consequently it became necessary, in order to protect Crown forests, to make provision that the unlawful destruction of timber should be punishable, for whatever purpose it might have been destroyed. * *

"The principal object of the Ordinance was to meet the case of the destruction of timber which had been destroyed for any purpose whatever; but advantage had been taken to introduce one or two important alterations which he thought would be useful."

32. *Administrative Rules enforced by the provincial authorities.*—Before examining the principle and working of the Crown Timber Ordinance, I should mention here, that in addition to this Ordinance, administrative rules have been introduced by the Government Agents in several Provinces to check the cutting and sale of timber and firewood. These rules regulate the felling of many valuable trees not included in the schedule, and aim at controlling generally the cutting of firewood, fence sticks, &c., specially exempted from the provisions of the Ordinance.

Regulations in the Northern, North-Central, and North-Western Provinces.—In the Northern Province the rules regulate the cutting of firewood and fence sticks. There are also certain rules regulating the issue of the better kinds of timber to the inhabitants of the Vanni. In the North-Central and North-Western Provinces the rules are very similar, permitting the cutting of fence sticks on obtaining a free pass or on payment of certain nominal royalties, and in the former, regulating the cutting of trees for building purposes, &c. The object everywhere is to prevent indiscriminate damage, and to correct the omissions of the Ordinance.

Rules for the inspection of private timber.—There are also rules regarding the inspection and stamping of timber belonging to private persons, correct measurements and lists being made, and a small fee charged for stamping each piece. This arrangement is in force in the Eastern Province, having been sanctioned by Government in 1875. It was introduced by Mr. Dickson in the Southern Province, but recently the stamping of timber and the payment of fees were stopped by the Government Agent owing to the Ordinance apparently not giving the necessary legal authority.

33. *Effect of the present Timber Ordinance.—Defective Schedule.*—I shall now proceed to examine the present Timber Ordinance, of which the principal point is the schedule, seeing how far it answers the requirements of State Forest Conservancy. With the great variety of Ceylon vegetation, no schedule containing less than 100 different species could possibly include all the timber trees which are in common use. If the intention is to protect all timber trees, only exempting shrubs, the faults of the present schedule are many. Tammana (Miscodon zeylanicus),† one of the most valuable woods in the Puttalam District, is omitted; Strychnos Nux-vomica, one of the finest timber trees in the North-Central Province, is excluded, whilst Strychnos potatorum, the Clearing-nut tree, never growing to any size, is included; as are also Ægle Marmelos (Beli) and Webera corymbosa (Tarani), both of which are shrubs only. The former is rare in the forests, and the latter never more than five inches in girth. Many trees growing in the forests of the dry zone are left out, far more valuable than most of those included, such as Munamal (Mimusops Elengi), Katama (Mangifera zeylanica), and Hulanhik (Chickrassia tabularis). The omissions as regards the luxuriant vegetation of the moist zone are, of course, far more numerous, the result being that all those omitted may be cut with perfect impunity.

34. *Many of the commonest timber trees included.*—On the other hand, Vedekanari (Dispyros ovalifolia), Panichi (Diospyros Embryopteris), and Tirkundel (Cassia Fistula)—trees

* Ceylon Hansard, 1878, page 19. † Since included at my suggestion.

which every villager cuts to build his house in the northern parts of the Island, and Godapara (Dillenia retusa), the tree that provides most of the fence stuff for the fields in the Southern Province, are included, and ought not to be cut without a permit. Many more instances of this sort could be given. Any attempt to afford special protection to a large number of species, by declaring them to be reserved trees, has always failed and proved unworkable in India. With a few trees, the wood of which can be easily recognized, much benefit is often derived from such a provision.

35. *The local administrative rules have been of great benefit, but they have not legal force.*—The provincial administrative rules have done much to rectify the omissions of the Ordinance, Whilst they inflict no hardship, they are of great assistance to forest conservancy. Enforcing these regulations has as yet occasioned no difficulty, but as soon as the people find that they lack legal force, further compliance cannot be expected. Until August, 1882, the cutting of tammana was restricted in the Puttalam District by making the people take out a permit, for which generally a nominal royalty was charged. When the people discovered that a prosecution for the unlicensed felling of this tree failed, owing to its not being in the schedule attached to the Timber Ordinance, and that the civil authorities had no legal power to prevent the timber being cut, the whole country turned out to lay in large stocks of the wood before it could be brought under the provisions of the Ordinance. I understand that a European forest contractor, lately arrived in the district, who, whatever right the Siphalese of the Puttalam District might have in the forests, could not possibly claim any, commenced cutting out timber for sale. Before the tree could be included in the schedule, a month later, great harm was done. Other cases could be mentioned in which the rights conferred indiscriminately by the Ordinance defeat all attempts to carry out effective forest conservancy; but it is not so much in omissions of this sort, as to general principles, that an examination of this Ordinance should be directed.

36. *General right of everyone to forest produce conferred by the Ordinance.*—The Ordinance declares that the forests are thrown open to all persons for their use, without the least restriction as to the cutting of certain kinds of timber not known to be valuable at present. Any person, not necessarily a domiciled inhabitant of Ceylon, may go into all Ceylon forests, not being reserves, and provided he does not cut or destroy* any of the trees mentioned in the schedule, he may do as he chooses with the rest. He may also cut any of these schedule trees, provided he converts them into agricultural implements, not necessarily for his own use. As in the dry zone forests the trees mentioned in the schedule are only five or ten to the acre, we might see all others cleared, the schedule trees being alone left standing, like park trees, without being able to interfere.

37. *Incompatibility of such general rights with proper forest conservancy.*—Is such a position at all tenable, and is it possible that if every person is at liberty to go into the forest, axe in hand, ostensibly for the purpose of cutting fence sticks of inferior timber, that any number of Foresters can ensure thefts of satinwood, ebony, &c., not taking place, or prevent damage being done?

38. *Convictions for chena cultivation under the Timber Ordinance are rare.*—Again, if a man makes a chena clearing, no prosecution will lie against him under the Timber Ordinance unless he carelessly cuts (say) a satinwood or an ebony tree. But why should he do this? The clearing of the forest, felling the inferior trees, and breaking up the soil is of itself no offence, and the evidence in a prosecution rests, when a chena has been burnt, on the identification of a charred stump. Unless proof is forthcoming that the accused was found cutting one of the schedule trees he cannot be punished. Even then he may say that the land belongs to him, or that the wood was cut to make a plough. Under section 13, the onus of proof that the land was not Crown land lies with the accused, yet by recent Supreme Court rulings the presumption appears to be in favour of the accused, and the most complete proof has to be given by the Crown that the land is not private. So great are the difficulties in obtaining a conviction under the present Timber Ordinance, that many revenue officers are now obliged to seek compensation, not punishment, by means of a civil action. In the latter case, the Crown sues for profits arising from forcible possession of the land; should the defendant set up a claim to the latter, the Crown, as plaintiff, is usually non-suited and directed to institute a land case. How easy it is, in either the criminal or the civil suit, to set up an apparently *bonâ fide* claim to the land, we have seen at the commencement of this chapter.

39. *The working of the Ordinance left to the local headmen.*—The general working of the Ordinance is left to the headmen of the district—the Kóralas and Arachchies—who are unpaid† officials. It was to their peculations and neglect of duty that the frauds connected with the old permit system were attributed. If no remuneration for their services is offered, it is not likely when timber has an enhanced value that they will show greater fidelity in the execution of their duties.

40. *Control on the transit of timber.*—By sections 7 and 9, the removal of timber from Crown and private lands is regulated. In the former case, the headman has to inspect the timber, and to stamp or mark each piece before a permit in the form of schedule C. is granted. The latter specifies neither the time within which the timber has to be removed, nor the place to which the timber is to be taken—two most important items. In the case of timber on private land, permit D. only specifies the number of trees. It requires no detail of the timber, and does not say where the timber is to be taken to. In contrast to clause 7, it omits to mention that the timber must be stamped, the want of some mark or other means of recognizing the timber after its inspection almost nullifying the effect of the regulation.

41. *Permit only required when timber is removed from the place of felling.*—But attention to the wording of the Ordinance will show that timber, whether removed from Crown or from

* "Injury" is not mentioned. † Unpaid for these duties.

private land, only requires a permit if in course of removal from the spot where it was felled. If the owner states that the timber was being shifted from some place where it had been stored, the prosecution must show that it was really being removed from the site of felling. Recent decisions of the courts show that defence such as this is valid, and that if once the timber is removed fifty yards from the spot where it grew, no control over its further transit can be legally exercised!

A chain stretched across the Kalu-ganga, near Kalutara, has for many years been used for stopping timber rafts, to check the permits under which timber is being taken down the river, but by a recent decision of the Police Court, Pánadurá, upheld by the Supreme Court, the further maintenance of a checking station appears useless, for when certain persons were prosecuted for removing timber under the Assistant Government Agent's permit after the time allowed had expired, the case was dismissed, as the court held that the Ordinance only required the removal of the timber within the time allowed, not its arrival at the specified destination. In this particular case the headman, although he acted under the Assistant Government Agent's orders, was sued in heavy damages for illegal detention of the rafts; and whilst the law remains so ambiguous in meaning, it is not likely that others will subject themselves to such personal responsibility, as a consequence of obeying the orders of their official superior.

42. *The Ordinance only recognizes village headmen and Foresters.—Other officials appointed by the Government Agent have no legal status.*—Under section 10, the only persons authorized to arrest persons committing a breach of the rules are "headmen, police officers, and persons appointed by the Governor as Foresters or Deputy-Foresters." Neither the Forester nor the Government Agent can authorize other Government servants, such as overseers or peons, to detain rafts, to check timber in transit, &c. On these grounds an overseer, properly authorized by the Forester and the Government Agent of the Western Province, was fined and imprisoned by the Police Magistrate, Avisawélla, for detaining a raft.

43. *Provisions of the Ordinance regarding reserved forests.*—In the matter of reserved forest lands, the provisions of the Ordinance are peculiar. Section 17 recognises two classes of reserves—those in which no timber may be cut for any purpose whatsoever, and those in which only certain trees, specially mentioned in the Proclamation, are reserved. Reserves of the first category are, by the terms of the Ordinance, closed equally to the Forester, the Government Agent, and the public. Yet all the reserves in the North-Western Province and more than half of those in the Southern Province come under this head, and in some of these large fellings have been going on for the last four years.

The idea in thus forming two sorts of reserves was presumably the formation of forests for climatic purposes, but it is a mistake to suppose that the cutting out of a few carefully selected trees can in any way injure the forest. Not only can it do no harm when due care is exercised, but it brings in more or less revenue from what would be otherwise only an expense.

The second class of reserves are only reserves in so far that wood of certain kinds, to be specially notified in each Proclamation, may not be cut for agricultural implements. The formation of this class of reserves has not been attempted, and it would probably have proved quite unworkable in the absence of any competent supervision. It will also be noticed that no procedure is provided for recording and settling the claims of private persons in the reserved forests.

44. *No power to stop grazing, collection of leaves, &c.*—In other ways the Ordinance is incomplete. No power is given in the forests generally, or in those reserved, to prohibit grazing, the collection of leaves for fodder or manure, or any of the many injurious acts, which it may be as necessary to stop in the interests of forest conservancy as the felling of timber. Lastly, the Governor has not the power to make additional rules to assist the working of the Ordinance, as I believe is the case with most of the Ceylon Ordinances.

45. *Statistics of the prosecutions and convictions under the Timber Ordinance.—Abstract of Returns.*—Regarding the efficacy of the penal clauses, a return of the cases instituted and the convictions obtained in the Police Courts of the Colony during the year 1881 is attached.

The following is the result arranged according to the different Provinces. The return of cases instituted is taken from the Queen's Advocate's annual statistics. The convictions are from particulars specially called for by the Colonial Secretary.

STATEMENT of Prosecutions under the Timber Ordinance, 1881.

Province.	Institutions. Cases.	Institutions. Persons	Convictions. Cases.	Convictions. Persons.
Western ...	88 ...	210	29 ...	56
Central ...	24 ...	53	12 ...	21
Southern ...	74 ...	149	42 ...	58
Northern ...	11 ...	33	5 ...	13
North-Western ...	53 ...	99	21 ...	34
Eastern ...	12 ...	23	4 ...	13
North-Central ...	13 ...	54	4 ...	16
Total ...	275 ...	621	117	211

46. *Proportion of convictions to cases instituted.*—From this it will be seen that 42 per cent. of the cases instituted resulted in convictions, 33 per cent. of the persons prosecuted being punished. These results will probably excite surprise, for all the prosecutions are carried on by the Crown, with the approval in each case of the Deputy Queen's Advocate. All these convictions are appealable to the Supreme Court, but no allowance is, I believe, made in the returns for those which have been set aside.

47. *The law so ineffective that a civil action for damages is often preferred to a criminal one.*—But the number of cases instituted does not by any means represent the number of offences, for some revenue officers now rely entirely on a civil action for redress. In the current year the number of cases instituted will therefore, I understand, be considerably less, although forest offences are not decreasing, whilst the proportion of convictions will be smaller, owing to new interpretations of the Ordinance. In the North-Western Province, the Government Agent, Mr. Sharpe, informed me that he finds a civil action the only alternative, when the Ordinance is so ineffective, although how little compensation the ordinary Sinhalese chena cultivator is able to pay as damages in a civil suit, when he has no fixed abode and no property, need scarcely be alluded to. Yet these are the worst offenders, and even if a criminal conviction is secured, it is no great hardship to be in jail and to be well fed for two months, whilst the chena crop ripens. The inefficacy of the Ordinance is, moreover, notorious, and wherever I have had the advantage of consulting the District officers, they have been unanimous in regarding it as inoperative.

48. *Failure of the Ordinance in attaining the objects in view.*—The intention in drafting the Ordinance was, as I have already shown, to prevent thefts of timber from Crown land, to check chena cultivation, and to meet the case of timber destroyed for any purpose whatsoever. It appears to have entirely failed in all these objects, especially with regard to chena cultivation. It can be regarded solely as an attempt to protect the interests of the Crown timber monopoly, although practically it gives little assistance in the attainment of this object.

The Ordinance in a manner attempts too much. In laying down a procedure for protecting the timber in Crown forests by rules regarding the felling, stamping, removal of timber, &c., it enters into administrative details which, as they must necessarily vary from time to time, have always to be left to the discretion of the local authorities, and to working rules sanctioned by the Executive Government. What we require is the effectual legal groundwork on which our forest system can be built up. This the Timber Ordinance entirely lacks. The formation of reserved forests plays quite a subordinate part, instead of being the basis on which all proper forest work must rest.

I do not, of course, wish to imply that the intention of the Legislature is correctly represented by the law as it now stands, any more than the spirit of the Ordinance is believed by many to be correctly int rpreted by judicial rulings. If the existing Ordinance has failed in its object, it is not for want of appreciation on the part of Government of the necessities of the case, but because a law of a tentative character, drawn up without a knowledge of the practical requirements of forest conservancy, had to be enforced in opposition to much older legislation. The latter, dating from the early days of British rule, offered a premium on the breaking up of Crown land, and was directly opposed in spirit to the new Timber Ordinance, yet no means were taken to make the two compatible.

So incomplete, indeed, is the Ordinance, that various regulations have been found necessary, which, as we have seen, cannot be enforced by legal process. Is it desirable that Government officers administering a Province should have to rely on illegal regulations to protect Crown property? The fee which the headmen receive in the Eastern Province, and did until recently in the Southern Province, cannot, under the Ordinance, be legally taken for the stamping of timber felled on private land. The latter constitutes it the duty of the headmen to check such timber without payment, and the taking of a fee might be taken to mean an illegal gratification under section 11. If the present law is insufficient for the protection of Government interests, the omission should be corrected by the Legislature; in every way it would appear inexpedient that Government or private interests should be supported by illegal measures, the enforcing of which depends chiefly on personal influence and on private sympathies.

THE REQUIREMENTS OF FUTURE FOREST LEGISLATION.

49. *The Timber Ordinance might be improved, but it is not suited to the requirements of Forest Conservancy.*—The Crown Timber Ordinance might be, no doubt, improved, and rendered much more effective by an amending Ordinance, but in drafting it the object of a Forest Ordinance was not properly understood; certainly the requirements of forest management and conservancy were not properly grasped.

50. *Destruction of timber not the only act injurious to Forests.*—If the protection of the Crown timber monopoly were the sole object of forest conservancy, the present Ordinance might, with certain amendments, no doubt be made somewhat more effective. But this is not the case. Timber is not the sole produce of the forest soil, nor is its destruction the only injurious act. Before we even arrive at the destruction of timber as defined by the Ordinance, we have the clearing or breaking up of the soil—whether for cultivation, quarrying, or gemming, offences relating to the soil alone, whatever the surface vegetation may be, which are far more permanently injurious to the interests of forest conservancy than the felling of a few trees.

51. *The protection of the forest area against encroachments the first step.*—Before everything else, it is necessary to protect the soil—the area on which we are going to work. If timber grew—as has been held in the past—spontaneously, if wherever we cut a satinwood tree others would immediately spring up to take its place, and there were no danger of this timber-producing area being curtailed, legislation need only provide for the prevention of thefts of forest produce. But a moment's consideration shows us that this is not the case. The area of forest is rapidly decreasing in default of proper protective measures, and we see that the existing laws do little to hinder the process which follows naturally from the spread of cultivation and the increase of population everywhere. Instead of timber growing spontaneously, the natural reproductive process is most disheartening, and will require much artificial aid.

But it is useless wasting money in assisting the natural reproductive process, unless we have in the first place effective legal means for protecting the forest area in which we work.

When the Crown is provided with the same means for protecting its property which every private individual can command, and when it has under control the clearing of forest land, then, and only then, may we safely spend money in reproductive measures without any misgivings. If the forests are to be really protected and properly managed, we must be provided with a law not only applicable to thefts of timber, but under which all possible forest offences may be punished. But the penal clauses of the law are of less importance, than that the whole forest system should be organized on a proper legal basis.

52. *The Ordinance must apply to all forest and waste lands.*—To effect this we must, as in India, Mauritius, and other countries, have an Ordinance dealing with all waste and forest lands at the disposal of Government. Everywhere the impossibility of separating waste lands from forest has been recognized, and in Ceylon the difficulty is even greater. All land not actually in cultivation is more or less covered with vegetation, partly consisting of species growing into trees. What is called waste land to-day, may be classed as forest twelve months hence, and the distinction is quite ambiguous.

53. *Protection of Crown land.*—There is at present no law providing effective protection for the waste lands. The responsibility for enforcing the law rests with the local revenue officers, but their time is generally so much taken up at head-quarters that the real work rests with the headmen. Of these, the Ratémahatmayá, Mudaliyár, or Wanniya is only paid, whilst the subordinates on whom most of the hard work falls, such as Kórála, Udaiyár, or Peace Officer, receive no remuneration for forest work. Without supervision it is impossible to expect that unpaid officials, exposed to great temptations, with only temporary tenure of office, will fulfil duties which must always expose them to much ill-feeling and bring them into great disrepute with their fellow-villagers and castemen. The headmen do not possess the hereditary influence of position which is so great a power in the Indian village communities, nor is it probable that as long as these same headmen in certain parts of the Island are allowed by the authorities to maintain an *exclusive monopoly* in buying the dry grain rents, that chenas will diminish. Their interests tend in the opposite direction,—certainly as long as they are allowed to buy the rents.

Under the Grain Tax Ordinance, the monopoly of farming the dry grain tax will lapse, but the power of the headmen will be greater than ever. They will then no longer have to combine to keep strangers from bidding at the rent sales. The dry grain cultivator, from the moment he sows his crop and sends in notice to the district office, down to the time that the value of the crop is assessed, will be in the hands of the headmen, and when so influential and lucrative an office as that of assessor of the grain duty on each crop is created for these officials, it is not likely they will energetically discourage chena cultivation. Whilst, however, the law itself is so uncertain, the revenue officers are powerless to punish even those few offenders whose names are sent in.

54. *A Forest Ordinance required as a basis for all forest work.*—Unless proper legislation acts as a check on the clearing of waste lands and for the protection of the forest, whilst a proper staff of foresters is kept up to see the law respected, little can be done to ensure their maintenance for the benefit of the community. I would therefore most strongly urge on the attention of Government the necessity of a good Forest Ordinance as the basis for all future work. A law is required giving full legal powers for the protection and administration of all forest and waste lands, so as to increase their utility and benefit to the community, whether directly, by securing a cheap and permanent supply of timber, fuel, &c., or by making revenue, or by the effectual protection of the necessary climatic reserves, or indirectly, by giving the revenue authorities sufficient legal power to protect intact for the requirements of the future, for sale or for grant, all forest and waste lands ; a law that, if carefully administered, will be equally effective for natives and Europeans, and prevent any similar sacrifice of Crown interests such as occurred in the Central Province when Crown forest, which European capital was waiting to buy and open out, was cleared by native chena cultivators before the eyes of the intending purchasers.

55. *The position of the Crown in regard to the Forests.*—The position of the State with regard to its forests and waste lands is often misunderstood, and the Crown is too frequently regarded as a private landholder, instead of as a trustee with a large and valuable public property, which it has to manage for the general good, and to protect against the innumerable forms of trespass to which State forest property is everywhere exposed. Such has certainly been the mistaken position assumed in administering the forest law of Ceylon, and although the Legislature may give extensive protective powers, judicial decisions have usually thrown all the advantage on to the other side. In endeavouring to punish forest offences, the courts have regarded the Crown not as a trustee for the whole nation, but as a landholder whose endeavours to protect an unjust monopoly ought to be thwarted in every way. The real object of the State is to administer its national trust to the best possible advantage, to form State Forest Domains for the permanent public benefit, protecting the public property against individual trespass. We wish to form reserves of timber and fuel, at the same time protecting the property of the nation and improving it. The Legislature has, not only in the Timber Ordinance, but in almost every other law, put large powers into the hands of the Executive Government, which it is trusted to exercise with due discretion. The State has a powerful monopoly, which, if not carefully administered and protected, may, as has already to a great extent happened in Ceylon, be gradually broken up and infringed on, so as to be of comparatively small value.

General public interests then suffer to benefit only a few individuals, who take advantage of the incomplete state of the law, and the ill-defined rights which it confers. The forest question can only receive proper treatment when regarded from the standpoint of a large national property, handed to us by the past generation, and which we are also bound to maintain in unimpaired productiveness for the benefit of the present and future generations.

56. *A definition of all existing rights necessary.*—For the proper management of our forest and other lands, in which the Crown and other parties have joint and undefined rights, it is first

of all necessary to ascertain and separate the interests of each party. How far the rights exist is a matter for future inquiry, but wherever proper forest conservancy has been introduced, no real advance has ever been made until the rights of all parties interested in the land and its produce have been properly defined. The Lombard proverb, "*roba di commun, roba di nessun,*"—(communal property is nobody's property)—has not only in Italy, but all over the world, proved painfully true in the case of forests, and perhaps nowhere more so than in Ceylon. The forests here are, of course, not what is generally understood by the term *communal*, but when such extensive and undefined rights exist, they form to all practical purposes the property of the general community.

It is not only in the case of forests that admitting a right without defining it has done so much injury to the interests of the Crown. In many parts of the Island we have immense areas cleared under the claim which each paddy cultivator has for a certain area of high land adjoining as an appurtenance of the low land. That the area of the appurtenance was always in proportion to the extent of paddy land is admitted, yet no measures were taken to limit the appurtenance, and the right has consequently often been taken advantage of to clear all the forest land within the vicinity of the village. Nor does the injury end with the destruction of the forest, for having once been cultivated, the land, originally cleared in the exercise of a customary right, is now claimed in proprietary right.

57. *No infringement of prescriptive rights intended.*—It must not, however, be supposed that the total abolition of rights must follow as a necessary consequence of proper forest conservancy, or from the settlement of existing rights which must precede it. Such is very far from our purpose. The exercise of rights of pasture, the collection of firewood, timber, &c., if regulated, can be made quite consistent with proper conservancy, and the object of forest legislation is to secure legal means by which the State, acting for the general public benefit, can manage the forests to the best advantage. It would only endeavour to restrict the rights hitherto exercised when detrimental to public interests, but as long as they can be maintained without seriously injuring or diminishing the natural forest growth, the Crown would be the last to infringe individual rights.

58. The principle of the present Ordinance is that everyone has a right of user in the forests. This would appear to be defined as a right to the better kinds of wood for agricultural implements, and a general right to all forest produce except the trees named in the schedule. But although under the Ordinance all Crown forests are burdened with this right, yet when the Government sells Crown lands the purchaser becomes absolute proprietor, subject only to existing rights of way, &c. He would never permit the exercise of rights such as the Timber Ordinance allows, and no claim is ever made for them.

It becomes, therefore, a question how far these assumed rights exist; if well-founded, they have always been allowed to fall into abeyance, and consequently to disappear on the sale of Crown land. From no claim being made, the inference is that no such rights have any real existence. They would be quite inconsistent with the rights of the Crown.

In amending the Timber Ordinance, 1878, so largely restricting the interests of all parties having claims to the better kinds of forest produce, and in proclaiming such large areas of reserved forests under the old or the new Ordinance, certain communities must have been seriously affected, yet no claim or protest was made. The fact, also, that the same Ordinance which confers rights in all Crown forests by section 17 permits of such rights being summarily extinguished without any inquiry, would of itself show how little real claim exists.

59. *Only a customary right of user probably exists.*—Indeed, it would appear to be the general opinion that no real rights to forest produce can be claimed in Ceylon, that no such claims have ever been admitted by the Crown, and that, although the Crown has allowed a certain right of user to be freely exercised, it has never been admitted as a vested right. Probably, a certain customary right of user can be claimed by the inhabitants of a village in the adjoining forests, but this is quite different from a prescriptive right, and has never been claimed as such. The claim of one village to collect honey or to shoot within a certain limit has only been recognized by custom as superior to that of another village; it has only existed as long as the land is unsold, and has always given way to the right of the Crown.

60. *A clear definition of all rights most important.*—It is, however, less important for forest conservancy to ascertain how far these and similar claims are well-founded, than to know once for all how we stand with regard to other parties. The requirements of the people in firewood, fence-sticks, pasture, &c., must be satisfied, and the exercise of such rights in moderation is not necessarily inconsistent with efficient forest conservancy. Only if such rights are allowed indiscriminately, if there are no means of regulating them and keeping under control the extension of cultivation or the cutting of timber, fence-sticks, &c., are they incompatible with the preservation of valuable timber forests. It is not necessary to curtail such rights as have been allowed by custom, where they can be proved, but what is required is a clear definition, and an equitable settlement of all existing claims, so as to guard against the accrual of others in the future, and the assumption of such false ones as are now rapidly diminishing the area of forest and denuding it of timber.

In other words, although we may recognize the claim of the village paddy cultivators of Mirigama on the Crown forests in the vicinity for fence sticks, the inferior kinds of house-building timber, and some of the better woods for agricultural implements, it is necessary that the quantity of these materials cut should be proportionate to their actual requirements, and that under pretence of satisfying these wants the villagers should not be permitted to range at large, axe in hand, over all the forests. It is immaterial what the rights which have been acquired may be; in some places it may be merely the collection of fence-sticks—a right which, though usually lightly spoken of, often means that 2 per cent. of the sticks cut are young satinwood. But where one right has grown up, others, as the area of forest gradually decreases, will come into greater prominence, and to prevent the further accrual of rights incompatible with forest conservancy, we

must take early steps to ascertain and define all that exist. For this a procedure is necessary, which will compel all claimants to come forward and to state their claims. We shall then, by an equitable settlement, arrange for their continuance or their commutation. In this way only can we ascertain how we stand with regard to our forests, and protect all individual rights which have grown up in the past—whether rightly or wrongly is of course immaterial—as long as they can be proved.

61. *Separation of areas necessary.*—But attempting this for the whole of the enormous areas of waste in Ceylon, amounting to two-thirds of the entire Island, would involve great expenditure of both time and labour. What therefore is requisite, is that a division of the area of Crown land should be made, and that instead of ineffectually attempting to carry out a general conservancy over the whole, we should separate such *lands* as we wish to maintain *permanently as forest from the areas* which are *not of sufficient value for timber purposes,* or which it is proposed to leave for general use, for firewood, pasture, &c., or to keep for sale and the extension of cultivation.

62. *Reserved Forests or State Forest Domains.*—The former, or the areas which we wish to maintain permanently as forest, will constitute *Reserved Forests* or *State Forest Domains*, which must not be confounded with the term "Reserved Forest Lands," used in the Timber Ordinance. These will be carefully selected with a view to their climatic or their economic value, and will subsequently undergo careful demarcation, accompanied by a careful settlement of the rights claimed by all parties. They will further become subject to special legislation for their protection, and for that of their produce. Their conservancy and management will be provided for by the appointment of special officers.

Some reserved forests will be selected for climatic reasons, as in the case of the present reserves at high elevations, or to protect the sources of streams and rivers. Others will be chosen in order to maintain a permanent supply of timber or of firewood. All alike will be worked for revenue and for the benefit of the community, as far as is consistent with the maintenance of the forest in a high state of productiveness and utility.

The land which we form into reserved forests will only comprise areas requisite for the immediate and prospective requirements of the Colony or of its export trade. This will not include nearly all the forests, or at most more than one-fourth of the area that has never been cleared.

63. *The rest of the areas to be left for cultivation, &c.*—The rest of the forest and waste lands which, by reason of their position or from the inferiority of the forest growth, are unsuited for forming into reserved forests, will, as has already been mentioned, be kept for extensions of cultivation, for supplying the ordinary local timber and fuel requirements, &c.

They will be administered under the same law, but under provisions different to those applicable to the reserved forests, and whilst the local inhabitant may freely utilize the commoner forest produce in satisfying his own personal and domestic wants, he will not be allowed to remove any for sale, nor will he be allowed to make a clearing, to break the soil, or otherwise to diminish the productiveness of the land without special authorization from the responsible revenue authority. Encroachments of the chena cultivator or alienation in other forms will be guarded against, attention being chiefly paid to this and to the protection of a few kinds of timber.

64. *Village Forests.*—The formation of village forests, from land belonging to the Crown entirely, or in which it has a divided right—to be set apart for the exclusive use of village communities—may be a useful feature to introduce in any future forest legislation in Ceylon, but it will only be after the State Forest Policy has been thoroughly developed that these details will receive attention.

65. It has also been suggested that in drafting a new Forest Ordinance applicable to the Crown waste lands, the necessary provisions might be included for carrying out what is known as the Chena Survey. The latter has been commenced in the Western Province with the object of reclaiming some of the large areas of Crown land which have been cleared for chena, and in which individual proprietary rights have grown up under Ordinance 12 of 1840. The land, originally either communal or Crown, is now cut up by plots claimed in individual right, and although the joint area of these claims may not be one-tenth of the whole, in the interests of the Crown and to permit of the land being sold, it is desirable to come to an equitable settlement with the individual proprietors. In some cases this has been done by mutual consent, but often whilst nine-tenths of a village wish to come to a settlement, a small faction holds out. It is to the advantage of both parties to come to a settlement; for after the cultivator has been forced to locate his claim, the latter being founded on a revenue receipt, in which the area of the land has purposely been understated, he finds that he has unwittingly cheated himself, and he would therefore gladly take a larger block within a demarcated village chena area, instead of risking a prosecution for exceeding the limits of his small plot. Similar though the procedure must be to that made use of in forming reserved forests, it does not appear advisable for many reasons to make the provisions of the Forest Ordinance applicable to the chena survey. The procedure suggested for the settlement of reserved forests is no doubt suitable, but the objects with which the two are carried out are so antagonistic, that it would be far better to legislate separately for each. In both a separation of the rights of all parties concerned is desired, but in the one we work only for the benefit of the community generally; although individual interests will be carefully protected, they must give way where the general welfare demands it. The chena survey, on the other hand, is but the result of the past neglect of Crown interests, and has only the sale of the land as an object.

66. *Form of the new Ordinance proposed. Burmah Forest Act.*—The necessity for a new law having been shown, it becomes necessary to determine what form it should take. To some extent we must be guided by experience that has been gained elsewhere. The Indian forest system

is similar to that of Ceylon, and if the suggestions made in this report meet with acceptance, the two will resemble one another still more. In Ceylon, as in the different Indian Presidencies, local modifications of the general system will be necessary, but the fundamental principles which have succeeded in India are suitable for adoption in Ceylon.

We have in India three Forest Acts—the Indian Act (VII. of 1878), applicable to Bengal and Bombay ; the Burmah Act (XIX. of 1881), current in British Burmah ; and the Madras Act, lately passed by the Madras Legislative Council, and about to be confirmed by the Government of India. Of these, I would recommend, as being that most suited to Ceylon, the Burmah Forest Act. It is the one with the most simple procedure and the one nearest approaching the principle of the present Timber Ordinance, and with some alterations will be found workable here. Both the Indian and the Madras Forests Acts, although agreeing in principle with the Burmah Act, contain several features which would be unnecessary.

The circumstances of Ceylon and Burmah are similar in many respects : in both countries the State is the owner of all waste lands, and in both chena or toungya constitutes the chief enemy of the forest. In Burmah as in Ceylon, there is superabundance of forest, but not of the right kind, cultivation and the unrestrained exercise of rights causing the good natural forest to be replaced only by worthless trees.

A copy of the Burmah Forest Act is attached to this report.

67. *Powers of the Burmah Act compared with that of the present Timber Ordinance*.—At first sight it may appear that the powers given by the Burmah Act are much greater than the present Ordinance confers, and that the procedure is too complicated for Ceylon, where there is no regular land settlement.

Regarding the first objection, it is of course necessary to distinguish the intention of the Ordinance from its legal effect. The intention is to prevent all timber of any value being cut without license in all Crown lands. Forest land may be reserved and closed without any enquiry into existing rights. The removal of timber from private land is prohibited without a permit.

The Burmah Act, in contrast, provides for a most careful enquiry and settlement of existing rights before a forest can be reserved. In Crown lands which are not reserved, only the felling of teak and of such other trees as are specially protected is prohibited.

68. I shall now briefly examine the Burmah Forest Act.

Definitions.—In chapter I., section 3, the definition of the terms "trees," "timber," and "forest produce" should be drawn attention to, as being comprehensive of all forest products.

Reserved forests how constituted.—Chapter II. deals of reserved forests, power being given to constitute land at the disposal of Government a reserved forest.

Procedure.—Sections 6 to 20 describe the procedure to be observed in forming a reserved forest. This may appear too complicated for adoption in Ceylon, but it is very simple in reality.

Settlement of rights.—A preliminary examination of the country having been made by the forest officer, and the limits of the proposed reserved forest roughly defined, the notification is issued by Government giving the position of the proposed reserve, and appointing a forest settlement officer. The succeeding sections detail the full procedure for disposing of all claims whether to chena, to pasture, to rights of way, &c. At least three months is allowed for preferring all claims, and after the expiry of the time fixed for presenting claims has elapsed, and all have been disposed of in the ways specified in sections 11 to 17, the forest may be declared a reserved forest. During the progress of the forest settlement the forest officer carries out a careful demarcation of the entire area.

Penal Clauses.—Sections 25 and 26 form the penal clauses relating to reserved forests. They will be found to comprise all the numerous offences which are not punishable under the Ceylon Timber Ordinance, of which the principal are cattle trespass, damage or injury in any form, making a clearing or breaking up land for cultivation. Section 27 exempts persons duly authorized by the forest officer, and right-holders, from the effect of the penal clauses.

Village Forests.—Chapter III. deals with village forests, and will require no immediate notice in Ceylon, although its provisions will form a useful feature in the Ordinance.

The protection of Crown land not reserved.—Chapter IV. provides for the protection of lands at the disposal of Government other than reserved forests. This is effected by reserving teak and certain specified trees, whilst section 37 provides that the following acts may be regulated by rules prescribed by the Chief Commissioner :—Toungya (chena) cultivation, the removal and sale of timber and other produce, the quarrying of stone, &c.

Importance of these for Ceylon.—It is to provisions of this sort that we should look for the protection of all Crown lands not formed into reserved forests. The timber of four or five trees, which must necessarily vary for each Province according to the position and climate, would be reserved. Beyond this the people would be free to cut the commoner kinds of timber for building, fencing, &c., but the clearing of land and the disposal of forest produce would be effectually checked.

Duty on foreign timber.—Chapter V., providing for a duty on timber imported from foreign territory, is not required in Ceylon.

Control of timber in transit.—Chapter VI. controls the transit of timber by land or by water.

Effective control required for Ceylon.—In Ceylon the means of effectually checking the transit of timber are perhaps more necessary than anything else for the immediate protection of the forests. The State, until recently, had almost an entire monopoly in forest produce. To protect this, and indeed to protect its large areas of forest against theft, the most efficient and yet the simplest means are to watch the different outlets by which timber can be taken to the open market. The local thefts of ebony and satinwood, in (say) the Puttalam and Anurádhapura Districts, are very small, as there is no means of disposing of the timber. But unless legal authority is given

for controlling such timber as passes down the Negombo canal, and again of examining that lying in the Colombo timber yards, it is impossible to prevent large quantities being stolen and to detect the thefts.

The principle of this legislation is also visible in the Timber Ordinance, of which sections 7 and 9 not permitting the removal of timber from Crown or private land without a permit, in the former case the timber being marked. But these provisions are incomplete, and as it has been ruled that the necessity for a permit only exists whilst the timber is being shifted from the actual place of felling, the Ordinance cannot be said to provide any control on transit. Moreover, an attempt to enforce the provisions of the Ordinance by checking timber rafts, &c., may involve heavy personal responsibility. With effective control on the roads, canals, and rivers, the protection of the forests will be a comparatively easy matter; when the State is the sole forest owner, it is not too much to expect that the same means should be provided as in other countries for its protection.

Drift Timber.—Chapter VII. provides for the disposal of drift timber. The provisions are less important for Ceylon, as there is comparatively little drift when all the river transport is in boats and tied rafts, but the rights of the Crown even in this matter should not be neglected. The habit is at present to consider all drift timber on the rivers the property of the Crown, some revenue being realized annually in the Western Province from this source.

Judicial procedure.—Chapter VIII. details the judicial procedure under the Act.

Cattle trespass.—Chapter IX. brings cattle trespass in a reserved forest within the provisions of the Cattle Trespass Act. In Ceylon, trespass neither in a reserved forest nor in a plantation being punishable under the Cattle Trespass Ordinance, similar provisions will be necessary.

RETURN of Cases instituted and of Convictions under the Crown Timber Ordinance (No. 6 of 1878), during the year 1881.

POLICE COURT.	Cases instituted.		Convictions.	
	Cases.	Persons.	Cases.	Persons.
Western Province.				
Avisávélla ...	2	2	1	1
Balangoḍa ...	2	2	—	—
Colombo ...	6	8	4	6
Kalutara ...	36	102	11	28
Kęgalla ...	23	50	11	19
Negombo ...	—	—	—	—
Pánaduré ...	17	43	2	2
Pasyála ...	1	2	—	—
Ratnapura and Rakwána	1	1	—	—
Central Province.				
Badulla ...	—	—	—	—
Dikoya ...	—	—	—	—
Dimbula ...	—	—	—	—
Galagedara ...	1	2	1	1
Gampola ...	1	2	1	1
Haldummulla ...	1	1	—	—
Kandy ...	1	1	—	—
Mátalé ...	7	10	1	1
Maturaṭa ...	2	10	—	—
Náwalapiṭiya ...	4	10	3	7
Nuwara Eliya ...	4	8	3	3
Paṇwila ...	3	9	3	8
Pusselláwa ...	—	—	—	—
Urugala ...	—	—	—	—
Southern Province.				
Balapiṭiya ...	6	14	2	5
Galle ..	5	9	3	3
Southern Province—contd.				
Hambantoṭa ..	2	14	1	7
Mátara ...	52	92	28	28
Taṇgalla ...	9	20	8	15
Northern Province.				
Chávakachchéri ...	—	—	—	—
Jaffna ...	—	—	—	—
Kayts ...	1	2	—	—
Mallákam ...	—	—	—	—
Mannár ...	4	9	2	2
Mullaittívu ..	1	1	—	—
Point Pedro ...	—	—	—	—
Vavúṇiyaṇ-Viláṇkulam ...	5	21	3	11
North-Western Province.				
Chilaw ...	3	5	1	2
Kurunégala ...	8	17	6	10
Kalpiṭiya ...	—	—	—	—
Máráwila ...	29	53	2	2
Puttaḷam ...	13	24	12	20
Eastern Province.				
Batticaloa ...	2	10	1	7
Kalmunai ...	1	1	—	—
Trincomalee ...	9	12	3	6
North-Central Province.				
Anurádhapura ...	13	54	4	16

CHAPTER VII.

CONSTITUTION OF THE FOREST AREA.

69. *Maintenance of a considerable part of the Island as forest.*—It will be clear that the maintenance as forest of a considerable portion of the Island will be necessary, both for the supply of timber and firewood, and for climatic purposes. In the low country, especially in the drier parts of the Island, there are large areas to which permanent cultivation cannot spread for many years, if ever. Some of these, in the interest of the Island generally, for revenue, as much as for climatic reasons and the ordinary timber and fuel requirements of the public, must always be maintained as forest. Other large tracts of country must be protected as forest until such time as the Government wants to sell or otherwise to dispose of the land, the produce being in the meanwhile sold or otherwise made use of to the best advantage to the Colony. In the mountain

zone some of the few remaining forests must be maintained for protection from wind, in which they will benefit certain parts of the country, although from their isolated character, and the small proportion their area will bear to the whole, they are not likely otherwise to influence the climate to any large extent.

70. *Two different lines of policy have been suggested.*—In the various reports regarding Ceylon forests, and in consulting Government officials and others, there are two opposite opinions as to the future treatment of the forest question. One party thinks that forest devastation has already gone so far, that no remedial measures can be of much use in saving the remaining forests; that so-called civilization having swallowed up all the forests in vicinity of towns, and that as timber is so difficult and expensive to get from the remote forests still remaining, the latter should be left to the present management, and that for our future timber supply we should plant up with teak large areas contiguous to our towns.

The opposite party would have the whole of the forest area declared a reserve, all works of improvement—such as planting and thinning—abandoned, and all efforts concentrated on strict conservancy, which would be enforced by a stringent law protecting all Crown forest lands, not only from the chena cultivator, but excluding even village communities from the right of user in the adjacent jungles.

Neither of these proposals appears to appreciate the true state of the case. To confine our attentions entirely to planting would mean that the forests now left must gradually be absorbed by chena cultivation. We might then find out that teak would not grow, and certainly that its artificial growth would be most costly. On the other hand, to neglect all works of improvement, planting, thinning, &c., as at present, would mean that the forests must gradually deteriorate, and the supply of timber decrease. Past attempts at strict conservancy over the whole area have not been reassuring, and to be effective they would mean an enormous protective staff, costing more than the forests, under the most favorable circumstances, could ever return.

71. *Strict Conservancy over a limited area, assisted by works of improvement, to be combined with general conservancy over the rest of the area.*—The true solution of the forest question is only to be found by combining strict conservancy over a limited area—assisted by works of improvement, planting, &c.—with general conservancy over the remainder of the Crown lands.

Instead of attempting conservancy over the whole area, it is proposed to limit the sphere of our principal operations to the areas best suited for forming into reserved forests. With regard to the rest of the area, we shall only maintain a general conservancy, preventing the cutting of four or five of the most valuable trees; stopping also the clearing of forest and the unauthorized sale of forest produce, but beyond this giving villagers and other local residents as many privileges as they now enjoy. For their better protection it is also proposed, if necessary, to form certain areas into village forests for the benefit of village communities only.

72. *Why a sub-division of the area is necessary.*—I shall endeavour briefly to explain why such a sub-division is necessary, and why general conservancy for the whole area would not do. It has already been shown at the commencement of this report how great the extent of the Ceylon forests and waste lands is, and how varied the growth. Their protection at present rests with the village headmen supervised by the Government Agent, and we have seen how ineffective this protection has been. It is now proposed to have a new law making it a criminal offence to cultivate or to clear forest land, and also to give the Forester, acting under the Government Agent, a proper official status in the provincial staff.

But in Provinces with over 300 square miles of waste, the Forester will find it a hopeless task attempting to prevent thefts of timber or to stop chenas, and in a great measure the protection of Crown land will devolve on the headmen as at present. If all the forests and waste lands were to remain in the same category, the Forester would only be able to exercise a general, and, consequently, a very incomplete supervision over the whole.

Anyone who has been off the high road in Ceylon, into the tracts of forest and scrub stretching from one end of the Island to the other, will see at once how superficial such an inspection would be, even with an officer possessed of much greater local knowledge and at a cost of much greater labor than we can expect from every one. The Forester would be wandering about checking chenas whilst the best forests, 60 miles off, were being cleared. If cases of clearing a forest were discovered—and in this he would have to rely entirely on headmen for information—it would be little satisfaction getting the party punished, when the forest trees could not be replaced. Our primary object is to protect the forests.

73. *Chenas only to be legalized, not prohibited. Unless the forest boundaries are defined, effective supervision impossible.*—In the North-Western, Western, and Southern Provinces it would be little use an officer going about attempting to check chenas. The matter has gone too far, and dry grain cultivation is now, more than ever, a necessity for the existence of the people. It cannot be stopped, and it would be hopeless to attempt it without great expense and without causing great misery. All we wish to do is to legalize and control it, preventing the people from cutting down any more forests.*

* For 10 or 15 years it has been held, that in compliance with an order from Government, chena cultivation could be stopped. But the impossibility of stopping the cultivation of grains on which the poorer people depend as much, or possibly even more than on paddy, and the inability of any administration to carry out orders in opposition to the mass of the people, and likely to inflict hardship, unless supported by the law, have not been considered. The issue of the order and its occasional repetition appears to have satisfied the conscience, especially when it has met with an occasional assurance that the order was being carried out, and that chenas were stopped. According to the Blue Books, chena cultivation has never been even checked: at the present moment many competent authorities say it is increasing, whilst paddy cultivation is decreasing; and even if, as in the Eastern Province, chenas are effectually checked and stopped by one officer, the people only go away to the scene of some more lenient regime, prepared to return when regulations are relaxed. On a change of officers, things may be reversed and the people

To prevent the forests not being encroached on, the present system involves a seizure of the crops belonging to the offenders, accompanied by spasmodic prosecutions under the Timber Ordinance. In the North-Western and Southern Provinces the areas under dry grain crops in 1881 were, according to the Blue Book, 49,000 and 33,000 acres respectively. Some of these clearings were in village lands, but supposing that only one-tenth the area in each Province was cleared in the vicinity of forests, how can one Forester hope to check fresh encroachments, unless the boundaries of forest and of field are recognisable. In an open country, where the growth is slow and the boundaries can be perambulated without difficulty, it would not be easy; and as a matter of fact, it has always been found impossible in India, where there are settlement survey maps to assist us. But in Ceylon, where in six months an impenetrable scrub grows up, hiding all traces of the former growth, how much greater must the difficulty be.

We have no village maps, and only in the immediate vicinity of land surveyed for sale, after the delay of getting preliminary plans from the Surveyor-General's Office, and calling in a surveyor, can we prove the existence of an encroachment. This procedure would be very slow and unworkable where the Forester has a considerable length of boundary line to protect. If there is no survey, the ownership of land is decided on the representations of the local headman. Presupposing honesty—which, considering the large stake he often has in chena cultivation, is improbable—it is clearly impossible for any individual in an unbroken stretch of chena scrub, without some boundary marks, to decide boundary disputes; so, notwithstanding a staff of Foresters being specially kept up to prevent fresh clearings, the forests are slowly but surely disappearing. For one case brought into the court, 99 pass unnoticed—even of the prosecutions only 42 per cent. result in convictions—so that it is but a losing game for the Crown. Even if the Forester acquires certain local knowledge, all is lost with a change of officers. There is no map on which he can record, for the benefit of his successor, the knowledge he has gained.

74. *In future, the forest boundary to be demarcated and defined.*—A complete change of front is necessary, and instead of wasting time and labour ineffectually endeavouring from the outside to see that chenas do not work their way into the forest, the only effectual plan is to take our stand on the forest boundary and to make it our line of defence. For this the boundaries of the forests must be demarcated. After this is done, we can easily see that the chena cultivator does not encroach, especially when it becomes the special duty of the Forester to see that the forest boundaries always remain intact.

75. *All forests need not be demarcated,—only such as will be reserved.*—It may be urged that this will involve great expense and trouble, and that we should get areas much larger than we require for timber, &c. It does not necessarily follow that all good forests must be demarcated: I am now speaking more particularly of the Central, North-Western, Western, and Southern Provinces, and here the complaint is that there are too few forests left. It is self-evident that to demarcate all forests would be a useless expense and trouble, when many will soon be sold. But supposing that the area of good forest at our disposal is larger than we require for timber and other reserves, it will then be necessary to select the best ones only. If at first we have too large an area, it is always easy to eliminate the worst, retaining the most suitable ones only for demarcation.

The question of expense is of less importance than following a proper line of policy which will save us subsequent expenditure and secure the object we have in view. But in reality the cost will be small, and as demarcation facilitates protection and working, it need not be considered.

76. But however adequate these arguments may appear, there is a still more powerful one in favour of delimitation. Criminal prosecutions for breaches of the Timber Ordinance now frequently fail owing to a claim to the land being set up: even if a conviction is secured in the lower court, a civil suit is frequently filed simultaneously with the appeal to the Supreme Court claiming the land. This of course raises reasonable doubts as to the boundaries of the Crown land, and consequently the conviction is very frequently set aside.

When our best forests are once demarcated with distinct boundaries, and after we have caused all claims to the land to be brought forward within a certain time, there can be no further doubt as to the proprietorship. In this way, what I understand to be one of the greatest obstacles in protecting the forests of Ceylon will be removed.

77. *The protection of the forests which are not reserved.*—Those forests which we do not reserve will be protected under general conservancy arrangements by the local staff of headmen, supervised by the Forester (as Government Agent's assistant), but the protection of the reserved forests will constitute his primary charge. The former will be managed under conservancy rules, which must necessarily vary according to the requirements of each district. Whilst the reserved forests will be either free of rights or only burdened with rights strictly defined, these will be open to the exercise of communal rights of pasture, collection of firewood, &c. Conservancy will be principally directed to three objects: *the protection of a limited number of valuable trees, the prevention of unauthorized cultivation, and the sale of forest produce.* The number of protected trees will not exceed five or six, and we shall thus abolish the present anomaly of a law which, if strictly enforced, would mean the ruin of every Sinhalese and Tamil villager in the Island. The

return, or possibly, a year of drought spreads the alarm of famine, and then permission being indiscriminately given to chena, more harm is done than if the whole cultivation was legalized and systematically controlled. In the years 1878-80, it was so in the Eastern Province, and we even now see the remains of chenas given to relieve the poor Sinhalese, but in reality converted into plantain gardens by well-to-do Moors. The fact that many crops were left rotting in these chenas—so largely did the supply exceed the demand—shows what abuses sprang up. It has been frequently pointed out that if the wants of the people are considered, and chenas are allowed in moderation, the people are easy to manage; if chenas are forbidden absolutely, they get exasperated, and when—owing to some excuse of famine, such as is brought forward year after year, as may be seen by referring to the records of the Mátara District, Southern Province—the orders of Government are suddenly relaxed, the forests are devasted wholesale in the absence of some protective organization.

poorest inhabitants will be able to build their houses and fence their fields without infringing any law. They may supply their individual requirements without the least restriction, but they will not be allowed to remove forest produce for sale, nor will they be allowed to unauthorized chena Crown land.

78. *Village Forests.*—In the most thickly-populated parts of the Island, and especially in the Kandyan districts, the people have gone on extending their chena cultivation, year after year getting further from their villages, and gradually swallowing up all the forest on which they have hitherto drawn for their building timber. They have annually encroached on the Crown forest until not only do they now chena beyond the boundary of the village common-land, but they also cut such timber as they require at great distances from their villages. It must before long become a question how far those rights of these people extend, and whether the division amongst shareholders, of what was village common-land, is to go on to an unlimited extent. In the interests of the Crown, and to prevent the few remaining forests being swallowed up, a limit must soon be put to these encroachments. The expediency should be considered of making over to each village, or to each group of villages, a certain area of Crown land as village forest for communal use.

79. We shall then have the Crown forest and waste lands divided into three classes:—

(1) *The reserved forests,* to be specially protected by the forest staff, kept up for the supply of timber for climatic purposes, &c., and managed for the benefit of the general community.

(2) *Other forests and waste lands,* in which members of the local community may supply their individual requirements *gratis* except as regards a few valuable timber trees, the clearing of land for chenas, and the sale of forest produce.

(3) *Village forests,* consisting of Crown land made over to groups of villages, for maintenance as timber reserves.

THE SELECTION OF TIMBER RESERVES.

80. *Value of Ceylon forests as compared with those of other countries.*—Looked at from an economic standpoint, the Ceylon forests generally, and more especially those in the drier parts of the Island, are the most undesirable and valueless, acre for acre, that could be found anywhere in the tropics, where all the natural conditions are so favorable to vegetation. We have an enormous area covered with forest, it is true, but of the component trees the greater proportion are either veré or other trees, never growing to any size, and of which the timber at the best is inferior and unsaleable.* Amongst these the satin, ebony, halmilla and palé stand generally singly. The number of these four species to the acre varies from two or three to thirty.

Often one comes across large areas with none of the saleable woods, and twenty trees to the acre will probably represent the best stocking in any forest, say one square mile in extent, which could be picked out in the Eastern Province. This will show how large an area of reserved forest must necessarily be demarcated to ensure a large supply of timber, and that necessarily the area, in proportion to the yield, must be much larger than in any part of India.

81. *Considerations in selecting reserved forests.*—In examining the forests for the selection of timber reserves, there are many points which must be considered. With regard to the forests and the timber they hold, the soil, position and climate, the standing timber, the size and age of the trees, and the mixture of the species, are some of the principal points. The area of the block, its shape and position with regard to other forests, and its distance from towns and villages are to be considered with regard to future protection and the prevention of theft, &c. But the most important factors in successful working are facilities for the export of timber: the distance to the nearest market, the facilities for carting or floating timber, the cost of working, &c., should first receive attention. The advantages of river transport did not escape the attention of purchasers of forest land in the Western Province, and it is to secure cheap transport that the reservation of the forests near the sea-board and along the navigable rivers of the western coast should first be taken in hand. Until this has been done, it is of the utmost importance that no further sales of Crown land should take place.

82. *Preliminary exploration necessary first of all.*—The first step in the selection of reserves is to make a careful examination of the forests. In May I suggested that this work should be commenced at once, and a circular accompained by a memorandum was printed and issued by the Colonial Secretary. In some Provinces the orders appear to have been entirely neglected; from others I have only received a discursive description, in which hardly any of the points mentioned in my memorandum have been noticed. A great deal might have been done in the last six months, when timber operations have generally been restricted, yet, although in each Province I have repeatedly urged the importance of the work, not a single map has been returned to me showing the distribution of the forests. What we require is a systematic examination of the country so as to ascertain what forests are left, where the best blocks are situated, and what their extent. Reports of headmen will not do, but the Forester must set to work and examine the whole of the country, taking first those parts in which transport is most easy, and as he goes on he must make proposals regarding the forests to be reserved.

Much of this information might have already been collected, and it is much to be regretted that we have so little definite information regarding the area and the growth of the forests. A general examination can be made so easily, whilst the Foresters are doing their other work, that I trust the collection of this and similar information will be no longer delayed.

The country must be examined block by block, and because from the roadside a few satinwood and ebony trees are seen, it must not be said that the road passes through an ebony or

* In the wet zone it is different, but here, too, hora and other poor woods predominate; which find but a very limited local sale.

a satinwood forest. Satinwood grows almost everywhere in Ceylon, but we want to know where the best large forests are. In carrying out this preliminary examination of the forests, the various points which were fully detailed in the circular already issued must be considered. The poverty of the forests, combined with the fact that we have very large areas to deal with, will make the selection of reserved forests in Ceylon no easy task. The great variety of the species and the patchy character of the forest will necessitate a careful examination of the whole area.

83. *Constitution of the forest growth.*—In considering the constitution of the forest growth, the principal points will be the proportion the good timber bears to the unsaleable and inferior, and the proportion of the different ages.

The latter point, especially, will require great attention, as very few forests in the dry zone have many middle-aged and young trees of the better kinds. The regularity of growth must be considered, and as we cannot hope to have equal growth over very large areas, pieces of similar growth must be joined together, giving the blocks a convenient form, without attempting to eliminate all inferior growth. For satinwood and other trees, six feet girth at breast height will constitute a first-class tree, or one fit for felling; for halmilla, a girth of four feet should be taken.

84. *How the work is to be carried out. A special staff not desirable.*—With so large an area of forest, the selection of reserves must be an operation occupying many years. If the policy is to be successful, it is important it should be conducted with due consideration of the various interests involved. It would no doubt be better in some ways if we could set to work with a large staff and finish the work in a few years, but this is not on the whole desirable.

The selection of reserved forests is no easy matter, and unless carried out with due care by competent forest officers would mean the proclamation of a large number of areas without the object of Government or the interests of the parties concerned receiving proper consideration; under these circumstances, the reservation would be purely nominal.

The profits, moreover, from forest management are too small at present to permit of any large additional staff being employed on the work.

85. *Demarcation to be done by the ordinary staff.*—I propose, therefore, that the whole of the work should be carried out by the ordinary provincial staff, assisted sometimes by surveyors. When systematic working is once introduced, the Forester will not always be employed in bringing out timber all the year round; three months may be generally spared for forest examination and demarcation, and then with a properly-organized staff the work will progress rapidly. Sometimes it may be better to stop working altogether for a year in one Province, and then the whole of the Forester's time will be devoted to the work. At present a good opportunity offers itself for commencing, since, owing to the abnormal fall in prices, it has been found expedient to restrict timber operations.

At first it will no doubt appear rather an endless task for one Forester with his small staff to examine the forests and make proposals regarding a whole Province. But after a few months' experience has been gained, the exploration and selection of reserves will be found to go on very rapidly. The work must be conducted systematically, the forests on the sea-board or near the rivers being done first; the examination finished in one district before the work is commenced elsewhere.

86. *Preliminary proposals to be sent in to Government.*—After the forests of a district or part of a district have been examined and reported on, it must be decided which are to be reserved. Proposals as complete as possible must be framed for one district, pattu, or other division, so as to enable Government to judge of their general effect. Before giving the requisite sanction for their being demarcated as reserved forests, a great many points and interests have to be considered. It will save time if all the necessary information is collected when the Forester conducts his preliminary enquiry.

87. *Final demarcation, boundary lines, &c.*—Having secured the necessary sanction from Government, the duty of the Forester will be to demarcate and lay down on the ground the actual boundary of the proposed reserve, the principal points being marked by boundary pillars. It is of course rather an object to secure simple boundaries, easy of recognition by every one and consequently less liable to be encroached on, than to include every available piece of forest. To mark the boundary, lines six feet broad should be cleared of jungle. The boundary should in addition be marked by blazing all the trees on the outer ridge of the reserve with a broad arrow. Satinwood boards should also be provided, painted white, with running numbers in black, to let into the trees at convenient distances. The boards should be four inches square and one inch thick, and they will be held to the trees with one nail. If this is done, and in this ten-feet strip a riding path is always kept clear to admit of the boundaries being patrolled, and if the principal angles are marked with stone boundary pillars, encroachments and trespass will be very easily detected. Dry stone pillars are sufficient; to build with lime and mortar would be too expensive except where, in the vicinity of towns, trespass is much feared: if there are no stones, a five-feet stake driven well into the ground, with earth piled round it to a height of three feet. In laying down the boundary, the Forester should measure the angles with a prismatic compass. The lengths of the boundary lines should also be chained. The rough sketch of the boundary, which can then be plotted, will serve our purpose as well as an accurate survey. The boundary marks, whether cairns of stone or masonry pillars, should also be numbered, and the officer in charge must periodically inspect the whole of the boundaries, checking the direction of the lines and the boundary marks, renewing the latter if necessary. A boundary register must also be drawn up, showing the length and direction of the boundary lines, and the position of the boundary marks.

88. *Survey unnecessary in most cases.*—It is not requisite that the reserved forests should be surveyed, and generally a survey would be too costly and tedious. In the case of a fuel reserve, where the rotation will be short, or with a plantation, working would be facilitated by having a map, but generally it will not be required.

89. *Settlement of claims. The majority of reserved forests will be free of rights.*—In forming a reserve we must ascertain what private claims to land or to rights of way, of pasture, &c., exist, under a procedure similar to that laid down in the Burmah Forest Act. The majority of reserved forests will, it is hoped, be secured free of rights, but in the interests of the people no less than of Government, it is most necessary to secure a careful enquiry once for all into the rights of all parties.

90. *Commutation of claims.*—Having ascertained what private claims exist, we can either arrange for a continued exercise of the rights or for their commutation. If the claims are very extensive, it will be a question whether the maintenance of proper conservancy is consistent with a continued exercise of the rights, and whether the cost of commutation, whether in money or by a grant of land, &c., is warranted by the value of the forest.

91. *Rights to chena cultivation.*—The main difficulty will arise in connection with the settlement of claims to chena cultivation. Claims will be brought forward by two classes of persons: firstly, the villagers who, as mentioned elsewhere, besides cultivating paddy are in the habit of clearing chenas in village land, originally belonging to the Crown or to the village community, but now claimed as "private land"; secondly, the migratory veddahs and others in the Eastern Province and elsewhere who usually have no wet cultivation.

Claims brought forward by villagers.—Regarding the former, the plan introduced in the chena survey of the Western Province, of making over a certain area of high land in one block for the use of the village, will probably commend itself in preference to assigning a separate block to each claimant.

Treatment of veddahs and others without any paddy land.—The veddahs and others now depending almost entirely on dry grain cultivation for their subsistence should be induced by liberal terms to settle down. Areas, similar to the areas given to the Karens in Burmah, might be made over to these people, and every encouragement given them to settle. These areas need not necessarily be excluded from the reserved forests, if they are defined by a six-feet strip cleared of forest; it might be one of the conditions of tenure, that this strip should always be kept clear. Within these areas the community would be permitted to chena without restriction during a continuance of good conduct. If carefully managed, the veddahs and others living continuously in the jungle may be made to render most valuable services as guides or timber cutters.

92. *Exclusion of village and village land from a reserved forest often impossible.*—It will also happen that some villages are so far surrounded by the reserved forests as to make their exclusion impracticable. In such cases it will be necessary to mark off a certain area surrounding or in the neighbourhood of the village, in which, according to circumstances, they may cut fence sticks, firewood, &c., or which they may chena.

Liberal treatment at the beginning will obviate much difficulty afterwards. The area allotted will be in proportion to the size of the village, and usually will only include sufficient ground for the village to chena at a 12 to 15 years' rotation. A shorter rotation when the crops on our poor Ceylon soil are so small would inflict great hardship. To this ought also to be added an area sufficient for the supply of fence sticks and other small sizes of timber. For house timber it is a question whether to mark out a small additional area, or to allow the right to cut timber in the reserve.

93. *The duties connected with ascertaining and settling of claims.*—The duty of ascertaining and investigating the claims of persons interested in the forest should rest with a civilian belonging either to the provincial staff, or specially appointed for the purpose. The duties will require some experience of local customs and requirements which have bearing on the claims brought forward. The work will be different to any ordinary judicial work, and the ordinary tribunals are quite unsuited for carrying it out. It will necessitate considerable knowledge of the locality, and the main points will have to be gone into by an enquiry on the ground in the same way that all disputes regarding land are now settled by the Government Agents and other local revenue officers.

A careful enquiry into all claims is necessary, and this will be secured best by entrusting the duty to an experienced revenue officer, who might, as under the Indian Acts, be appointed Forest Settlement Officer. The ordinary judicial procedure of Ceylon is not suitable, and although appeals might lie from the Settlement Court to one of the ordinary courts, it will probably be found in practice that very few appeals are made. Government will only endeavour to arrive at an equitable settlement, and if a decision more satisfactory to all parties will usually be secured in the Settlement Court, it would be most unwise to introduce cumbrous judicial procedure, involving heavy expense on all parties.

Probable area of reserves.—As to the probable area of reserves, it would be useless to hazard any estimate until the forests have been carefully examined. In the moist zone, where for timber, for the railway fuel supply, and for climatic purposes large reserves are required, their area will necessarily be much curtailed by the spread of cultivation, of chenas, of villages and private properties. In the hills the reserves will be even smaller, the only blocks of Crown forest unsold or not cleared by the chena cultivator in the country south of Kandy being on the central range between False Pedro, Nuwara Eliya, the Elk and Horton Plains, most of which is at over 5,000 feet elevation. In the neighbourhood of the Adam's Peak range there are also considerable areas of forest still uncleared. In the dry zone the reserves might be very large, and owing to the peculiar characters of the forest already described, it will be no easy matter to decide what to select. I shall, however, endeavour to explain the direction which the selection of reserves should take in the different parts of the Island.

RESERVED FORESTS IN THE MOIST ZONE.

94. This comprises the Western Province, the Kurunégala District of the North-Western Province, and the Galle and Mátara Districts of the Southern Province.

The forests hold little timber of any great value, and our object will be less the growth of cabinet woods, than to utilize the softer woods, of which the forests mainly consist. Few of the woods are durable, but the principal ones—hora, godapara, del, kos, dawata, dúna, mendorá, lunumidella, liyaṇ—find a ready sale for common building purposes. There is also a demand for firewood at Colombo.

Probable situation of reserves.—Western Province.—In the Colombo District I can only hear of five forests, with a total area of 3,500 acres. In the Negombo and Keṇgalla Districts the returns say that there are no blocks left of an area of 500 acres. In the Kalutara and Sabaragamuwa Districts, there are some very fine forests. In the former the area is estimated at 16,000 acres, and most of the forests are in the vicinity of the rivers. The Sabaragamuwa District has been little explored. The greater part of the Kukulu kóralé with the Siṇha Rája forest was originally covered with forest; chena clearings have caused great destruction, and the area is now given at 13,000 acres, but from what I have seen of this district from the southern side, this appears underestimated. These forests are reported on by Mr. Gunn, in Sessional Paper XXV. of 1873, and from this it appears that the Siṇha Rája and other forests in the Kukulu kóralé are too high up the river for floating, and that the country is too hilly for carting. The same objection applies to the forests on the western, southern, and eastern faces of the Adam's Peak range. Many of the former, therefore, would scarcely be worth reserving, but early steps should be taken to preserve the Adam's Peak forests. The effect of clearing the slopes, which oppose so effective a barrier to the rain-clouds from the south-west, might have a most injurious effect on the climate.

The probable area of forest available in the Western Province will be :—

Colombo District	...	8,000	acres
Negombo do	...	—	None, unless small forests are taken up.
Keṇgalla do	...	5,000	acres
Kalutara do	...	16,000	,,
Sabaragamuwa District	...	5,000	,, not including the Kukulu kóralé, where the forests are unworkable.
Total areas	...	34,000	acres.

The selection of reserves should begin along the Keḷani and Kalu-gaṇgas.

96. *Kurunégala District.*—In those parts of the Kurunégala District situated in the moist zone, most of the forests have been sold or cleared, and there are now only small patches of original forest left. There are several reserved forests in this district, but their exact position is difficult to ascertain. Part, at least, of one has been sold within two miles of Polgahawela station, and the others, not being specially looked after, are more or less encroached on. It will be necessary to ascertain where these old reserves are, and if they are suitable for forming into reserved forests. The principal objects in view will be to provide fuel reserves near the railway line, to provide timber for Kurunégala itself and for the populous country between Chilaw and Negombo, and for the Colombo market, to which the canal furnishes easy means of transport. The whole of the district requires further examination before the area available can be estimated.

97. *Galle and Mátara Districts, Southern Province.*—Regarding the Galle and Mátara Districts definite information is also wanting. On the Gindura there are fine forests, but those best situated were all sold in 1833 at 5*s.* 3*d.* an acre, and prove a source of great wealth to the owners. The forests, still the property of the Crown, are far back from the river, or are above Hinidum, where the river is no longer navigable. On the north bank of the Gindura, three miles from Baddégama, I found two fine forests—Beraliakanda and Baṭapola—which should be reserved. The country about here is thickly populated, and none of the forests being more than three miles from a navigable river, makes them very valuable for the local supply and for that of Galle and the villages along the coast. At the time of my visit Baṭapola forest was being surveyed for sale. It consists of del, kos, godapara, and milla, well-grown, although chiefly young, the big timber having been stolen.*

In the Mátara District the three best forests are Wilpita, three miles from Akureṣsa, Batuwita, eight miles north of Mátara, and a forest near Kekanadura tank. From these there is easy transport to Mátara, and as these are all being encroached on by cultivation, their early demarcation is necessary.

98. *Final Considerations in selecting reserved forests.*—Although this list does not profess to be complete, the area of forests suitable for timber reserves in the moist zone is undoubtedly small. But in making the selection two points should be borne in mind:—Firstly, that with the heavy rainfall, vegetation being so rapid, many areas now most unpromising will become in a few years restocked if left untouched. Our choice need not, therefore, be entirely confined to forests at the moment well stocked with good timber, but to make up the good-sized blocks of convenient shape we may join smaller blocks of forest by including the intervening patches of chena and scrub.

Secondly, it must also be remembered that our position has changed considerably in the last twenty years. The Crown no longer has the timber monopoly. It has sold the best forests to traders, whose only thought is to make quick returns, and who are not hampered by considerations of conservancy. Europeans, too, have bought land from which they sell the timber for a mere nothing. From these two sources the Colombo and Galle markets will be swamped for some

* The inefficiency of the Timber Ordinance in protecting the forests could not have been better illustrated than at Baṭapola. I saw myself five new sheds, and the Forester assured me two large houses had been built by the chief local headman from timber cut illicitly. Up to the present time, although eight months have elapsed, no one has been punished. Such little timber as was seized by the Forester was to have been sold locally by the implicated headman, but at my urgent request it was sent to Ambalangoḍa, where it fetched over Rs. 100, proving that the commonest sorts of timber sell well.

time, and at first the financial results of improved management will be less marked than two or three years later. Gradually these supplies will become exhausted, and until prices are sufficiently high to admit of remunerative working, we must only occupy ourselves with demarcation and the prevention of thefts of Crown timber. The financial results of the first year or two may not be very good, and should not in any case be accepted as a criterion of the future. It is believed that a large quantity of timber now brought to Colombo comes from Crown lands, and if this is the case, efficient control on the rivers and canals will result in a rise in the price of timber. Although ultimately the measures proposed cannot fail to give very fine results financially, this cannot be regarded of such vital importance as forest preservation, for unless early measures are taken to protect the remaining forests, it is very apparent that no timber will be left soon on the Western coast.

PROTECTION OF THE COLOMBO WATER SUPPLY.

99. *Catchment area, Colombo Water Supply.*—I desire here to draw attention to the catchment area of the Colombo water supply. Above the reservoir, at Labugama, there is a funnel-shaped basin of 2,137 acres, in which the springs and streams supplying the Colombo waterworks rise. The area, having been cleared of cultivation and habitations, should now be placed under proper forest management, and by being declared a reserved forest, become subject to special protective measures.

It is so important to protect the forests in which the springs rise, and to guard against all possibility of pollution, that it should be made one of the duties of the Forester (supervised by the Conservator) to see that no encroachments are allowed by the resident guardian. The waterworks will be under municipal control, but as the Forester will have work at Hanwella and at other places close by, it could probably be arranged that this should form part of his regular duties. The land is probably too far from Colombo to make any planting operations advisable.

RESERVES IN THE MOUNTAIN ZONE.

100. *Reserved forests in the mountain zone.—Complete denudation.*—The almost complete denudation of the hills in the Central Province cannot fail to strike anyone going into the coffee districts, and the fact that out of a total area of 3,850,000 acres, or about 6,000 square miles, there should be few large forests, whilst only one-sixth of the area is cultivated, describes better than any words how far destruction has gone.

101. *Effect on the climate.*—It would be outside the purposes of this report to examine the general results of forest denudation. How far the destruction of forest has influenced the climate, especially the annual rainfall of Ceylon, is a matter requiring more complete data before any definite conclusions can be drawn. In Mauritius and in the West Indian Islands denudation has entirely altered the climate, and although at present the annual rainfall of Ceylon does not appear to be appreciably influenced, it is unlikely that such a complete change in the natural vegetation can have been of no effect.

Ceylon is most favourably situated in contrast to other countries, and everything is combined to counterbalance a complete disregard of all nature's requirements. Thanks to a heavy rainfall, unaccompanied by any long dry season, extraordinary fertility of the soil and equable humid climate, the surface is never bare; however much exhausted by cultivation, a dense scrub growth springs up, which shades the soil; the latter again, although poor, is peculiarly adapted for resisting scour; and the formation of ravines, which elsewhere invariably accompany such wholesale forest destruction, is almost unknown in Ceylon.

102. *On rainfall, &c.*—Although as far as we know the total annual rainfall is unaffected, many observant planters state that the character of the rainfall is now different. Instead of a gentle rain going on for days, the downpour is of shorter duration and much heavier; this is one of the usual effects of forest denudation. A general rise of temperature has also resulted, the fog or cloud line being by general consent 100 feet higher than it was ten years ago. Clearing the forest could only have caused a rise of temperature, and this would of itself argue a decrease in the rainfall. But as the latter, especially the summer rains, is chiefly caused by the presence of the mountain barrier stretching across the Central Province, only a long series of observations would prove any actual decrease in the number of passing showers.

103. *The most marked effect has been in the clearing of spurs and ridges.*—It is from the ill-considered clearing of trees from the ridges, and from the absence of forest to break the force of the wind, that coffee growers suffer so much. The narrow belts of trees, one to two chains wide, reserved along the summits of the main ridges were, even had they remained standing, quite inadequate to check the force of the south-west gales. In felling and burning the forest on either side, the trees were allowed to fall on and break those in the belts. No care was afterwards taken to prevent the fire getting in, so that now the ridge-belts of trees exist either only in name or in the shape of a few stag-headed trees. But even broader belts on the main ridges only would not have been sufficient to check the wind. What was required was that on all the higher spurs a broad belt of forest should have been left to keep off the wind, which now sweeps across the ridges, and tears along the treeless slopes during the five months of the south-west monsoon.

104. *Forests left in the elevated parts of the Central Province.—Pedro Range.*—In the elevated parts of the Central Province the only forests left are situated along the higher ranges in the centre of the plateau. These ranges have an average elevation of about 6,000 feet, and the forest is on the crest of the range and down to an elevation of about 5,000 feet on either side. Although we have this area free of cultivation, &c., it is not everywhere covered with forest. Over a considerable area, especially on the flat ridges and saddles known as the Elk and Horton plains, the Bopatts, &c., the forest is intermixed with patana in varying proportions, and probably not more than two-thirds of the whole is covered with trees. The eastern slopes, too, are chiefly patana. This reserve extends without a break, except at Nuwara Eliya, from False Pedro for about 30 miles to

the Elk and Horton Plains to Kirigalpotta. The area from False Pedro to the proposed Elk Plains' station is 47,615 acres, and with all the connected outlying pieces, such as the Horton Plains, Ohiya Valley, and the Bopatts, the total area comes to 90,000 acres.

Adam's Peak.—On the east, south, and west slopes of the Adam's Peak range there are other forests of about 9,000 acres. In the centre of the western planting districts there are also two so-called reserves of 1,000 acres and 750 acres, respectively, and at the head of the Maskeliya valley a block of 2,335 acres.

Uva.—Eastwards, in the drier Uva country, there are no forests left with the exception of a small reserve of 600 acres on Namanakuli. Here the coffee estates may, speaking generally, be said to represent places where the only forest originally grew, few patanas having been sold for coffee cultivation.

105. *Area of forest in the less elevated parts of the Central Province.*—The coffee estates are situated principally at elevations of 3,000 to 5,000 feet, and occupy the greater part of the hill slopes at these elevations. Below 3,000 feet the chena cultivator is very busy, and except where coffee or tea is grown he will be found to have cleared almost all the forest. In the low hills of the Badulla District and low country, with an uncultivated area of 2,119,000 acres, the total area of forest is perhaps 5,000 acres. In the Kandy District the area of forest is about the same. The only forests of any size are at the extreme north end of the Mátalé District, which are too remote to be of any great value.

106. *How the large central reserve at over 5,000 feet elevation has been preserved.*—The existence of the large area of forest on the central range is mainly due to the fact that, until within the last eight to ten years, only coffee was cultivated in the Central Province. The upper limit of good estates being about 4,500 feet, no demand for land at higher elevations arose till 1874-76, when cinchona cultivation at high elevations began. Fortunately, in 1873, Sir Joseph Hooker drew the attention of the Secretary of State to the extensive clearings of forest, and to the climatic changes that might be caused by such a wholesale denudation of the hills, completely altering the face of the country. This appears to have been the first occasion on which the necessity of creating mountain reserves was noticed. A rule was consequently sanctioned by the Secretary of State that no land at over 5,000 feet elevation should be sold.

107. *Reservation of ridge belts.*—It has also been the custom during the past few years to reserve along the tops of the main ridges one- or two-chain strips of forest as wind belts; also, on either side of streams, when land is sold, to reserve a belt of forest of the same width.

108. *Effect of the rules regarding reserves.*—In examining the results of the forest reserve rules, we find that the 5,000 feet line has saved intact, except near Nuwara Eliya, where a small area has been sold, the large block of 90,000 acres already alluded to, which I have elsewhere called the central reserve. The rainfall in the neighbourhood of Adam's Peak is so heavy that there has been less demand for land in that quarter; but the action of Sir Joseph Hooker was generally beneficial in forcibly directing public attention to the ill-considered system of selling Crown land. The ridge belts scarcely exist except in name. This could only be expected when a narrow strip of close-grown forest trees was suddenly exposed to the full violence of the wind, besides being simultaneously attacked on both sides by fire. The same may be said of the stream belts, which, during the last three years, have been leased to the owners of the adjoining estates at a nominal rental, with permission to clear the forest and to replant with useful trees.

109. *It is too late to consider the general question of hill reserves.*—On the general question of reserves in the hill zone it is useless to enter when so little forest is left, and I shall confine myself to the consideration of the points on which an opinion is specially called for.

Stream reserve belts.—The first concerns the reserve of one- or two-chain belts along the streams. Should they be retained or leased to the proprietors of the adjoining estates?

110. *Intention in making these reserves.*—The intention in making the reserves was to prevent erosion of the river banks and to check evaporation. It was also supposed that a fringe of forest at the bottom of a steep slope would filter the water which rushes down, and in this way that the "ellas" or irrigation channels leading to the paddy fields would become less blocked up with silt. In going through the Central Province with the Hon. J. Stoddart, we found that the stream belts exist only in name. There is no return showing on what streams belts were originally reserved, but, with the exception of one or two cases where lines of blue gums have been planted to replace the original belt, all the ravines were quite bare. This is partly due to a good deal of land having been sold before this system was commenced, but also in some measure to no security being taken for the protection of the original trees. The natural result was that in following the usual custom of felling down hill the belts were much injured. In firing the clearing no measures were taken to keep the fire out of the belt, and consequently it swept through, burning the tops and branches broken in felling the trees outside, and damaging or killing most of those left standing. In the place of a belt of forest a dense scrub grew up, of which the estate owner complained as harbouring weeds and vermin. Hence arose the practice of leasing the belts to the respective estate owners, with permission to clear the forest and to plant blue gum, sapu, &c. No measures were taken to supervise this work, and now the reserves are in many cases quite bare. An application sent in recently from Maskeliya for leave to clear the forest belt abutting on his estate, and to plant it with new products, shows that there is a misapprehension as to the object of Government in allowing the relaxation of the original rule.

111. *Their effect.*—In the absence of any well-preserved series of belts, it is impossible to judge accurately of the benefits which they might confer; but, theoretically, narrow strips 22 to 44 yards wide, of the densest forest on the banks of a stream would have little effect in maintaining the water supply by checking evaporation, whilst, practically, the maintenance of narrow isolated strips of original forest in so windy a country would prove almost impossible. The fact, too, of all other forest being cleared, exposing the belts to thefts of timber and firewood on all sides, would only add to the practical difficulties.

112. *Stream belts would in any case be of little service.*—Evaporation is an exceedingly small factor in causing streams to dry up, and in the humid atmosphere of Ceylon, heavily charged with watery vapour, its influence is much less than in the centre of an arid continent. Strips of forest along the streams can be of no practical value if the hills, where the sources of the streams lie, are themselves unwooded, and if the springs are allowed to dry up by the clearing of their natural protector, the forest. When the permanent water supply of a stream is endangered, it is useless planting trees along the banks. The only remedy is to go to its sources—to the denuded slopes and funnel-shaped valleys which collect the rainfall, and which, unless the soil is protected and covered with forest and decayed vegetable matter to retain the moisture, allow the rain to run off immediately, and to form torrents and floods in the rivers below.

113. *Only slight erosion in the Ceylon hills.*—The only way in which the river belts can be of benefit is by preventing erosion of the banks, the roots holding the soil together and keeping the stream in one course; but this applies only in alluvial valleys and plains like the Punjab, where the streams, subject to sudden rises and overflows, scour out for themselves new beds; it has little effect in the rocky soil of the Ceylon hills, where the rivers flow in deep rocky beds.

114. *The reserving of these belts based on a misconception.*—The misconception that the stream belts would relieve the rain water of the soil held in suspension is, of course, due to erroneous ideas as to the conformation of the hill slopes. Very little of the rain runs directly down the slopes into the main streams; nearly all passes first into side valleys and depressions, as the most cursory inspection of any hill valley in a shower of rain will show. Ceylon presents a great contrast to other countries in the absence of scour and of damage done by the torrents of rain which pour off the steep hill slopes cleared for coffee. When once the surface layer of vegetable mould has disappeared, partly blown, partly washed away, the water runs off slopes of 30° to 60° without being discoloured, and the clearness of the mountain streams in the coffee districts, even in the heaviest floods, is most remarkable.* This result is due to the careful system of drainage, which is now universal, and still more to the peculiar nature of the soil. Instead of a small clearing as in the clay slate formations of the Himalayas and the Alps, immediately causing the formation a ravine or a landslip, very few of the slopes in Ceylon are thus disfigured, notwithstanding the wholesale way in which the hill sides have been cleared.

115. *In abolition of this rule recommended.*—It will be seen, therefore, that no real benefit is to be derived from these stream reserves, whilst their proper maintenance would be recognized by any practical planter as almost insuperably difficult. Opinions may differ as to the value of the belts, but there can be no divergence as to the extreme difficulty of maintaining a strip of old forest, or of growing, to order, a belt of exotic trees sufficiently dense. Practically, it would be impossible, whilst to attempt it would involve us in endless disputes with a large proportion of the planting community. I am most decidedly of opinion that in future these belts should not be reserved, and that those already marked out should be sold to the owners of the adjoining properties.†

116. *The sale of land at high elevations.*—The other question on which an opinion is asked is, whether land should be sold or leased—

For a Grazing Farm.

(1) On the Elk Plains;
(2) On the Kandapola road east of Nuwara Eliya;

For Cinchona and Coffee.

(3) In the Ohiya valley; and
(4) On the top of Namanakuli.

These points involve a general consideration of the sale of the few remaining forests on the high ranges.

117. *None of the large central reserve block should be sold.*—After considering the question with the Surveyor-General, we came to the conclusion that it would be very inadvisable to sell or to lease any of the great central reserve of 90,000 acres.‡

The climatic influence of so large a forest in the centre of the planting districts cannot be over estimated, and the effect of clearing the upper slopes and crests of the high ranges, to which the western side of the Island owes the greater part of its rainfall, might be disastrous. Numerous applications for this land have been refused since 1873, and there is no reason for recommending the least infringement of the well-considered rule.

118. *The whole will be required for railway fuel.*—The demand for fuel that must spring up immediately the railway is opened to Nánu-oya, and possibly extended to Haputalé, affords a new and additional reason for retaining all the forest south of Nuwara Eliya, including the Elk Plains and Horton Plains, and also the whole of the great western block. The forest at over 5,000 feet elevation is much wind-blown, and the trees are short and slow growing. It therefore will require the most careful treatment as mittel wald or jardinage, when timber is being cut, to maintain a constant supply of fuel, and it is essential to have a very large area at our disposal. The forests I have mentioned do not appear too large, when to ensure proper reproduction and to run no risk of delaying the natural reproduction, the rotation should be as long as possible.

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* The dirty colour of the Mahaweli-gaṇga, at Kandy, comes chiefly from water off paddy fields.

† As the adoption of this view would involve an important change of the present policy, I have consulted one of the greatest authorities on the management of hill forests, to find that his opinion coincides with the views here expressed.

‡ Garden plots might be leased when the railway opens, but only under certain conditions regarding cultivation; in cases of non-compliance, for Government to have the power of resumption.

119. *Sale of land in the Ohiya Valley would be inadvisable.*—Regarding the sale of land on the Ohiya valley, which forms the extreme easterly portion of the Horton Plains forest, the same reasons must hold good. Apart from climatic influence, the forest in this valley being the source of a valuable irrigation stream, the sale of forest abutting on the railway trace would be most injudicious. The nearer the fuel can be had, the cheaper it must be—a consideration that those who would have all Crown land sold indiscriminately do not often remember. From the Ohiya valley eastwards there are, I believe, no Crown forests left in the vicinity of the railway trace, except a small plot of about 200 acres between Ilaputalé and Roehampton.

120. *Reserve on Namanakuli.*—The small block of forest on Namanakuli, at the head of the Spring Valley Company's estates, should also not be sold. It lies at an elevation of over 6,500 feet, and is the only forest left unsold in the hills of the Badulla District.

121. *The reserves near Adam's Peak and the other small blocks of forest left in the Central Province.*—The forests on the south-westerly slopes of the Adam's Peak range, together with 9,000 acres on the easterly slopes, and 2,335 acres comprising the block of forest at the head of the Maskeliya valley, should be most carefully protected. The other forests require no special notice, but they will be found detailed in the appendix. Each will require special consideration, and if they form fair-sized well-situated blocks, it would be better to preserve them if arrangements can be made for efficient protection. A map has been prepared* showing each of the remaining pieces of forest in the elevated portions of the Central Province.

122. *Necessity for a demarcation of all so-called reserves in the Central Province, and for their being gazetted reserved forests.*—In conclusion, I would point to the absolute necessity of a proper demarcation of all Crown reserves in the Central Province. The large central block has in many places most irregular boundaries—often a semi-detached neck of land runs between two estates—and the boundaries generally are so ill-defined that encroachments are much to be feared. If the Crown forests are to be preserved, they must be really closed except to duly authorized persons, and not become, as these narrow necks and Crown forests abutting on private lands often are, a timber and fuel preserve for the benefit of the adjoining estates only. The boundaries require to be generally rectified and defined, so as to be easily recognized by everyone. The semi-detached pieces of land ought also to be excluded and sold, and when this has been done, measures must be taken to prevent further thefts of forest produce. The original survey boundary marks are no longer recognizable, and unless the boundaries are simplified and defined by some permanent marks, connected by a trench, detection of any encroachments will be difficult, and will always involve immense loss of time and of money if they have to be proved.

123. *Sale of land for forming a grazing farm not recommended. A lease not likely to be satisfactory.*—Regarding the application for land near Kandapolla, I see no reason now to recommend any exception being made in favour of a grazing farm. The proposal includes the purchase of two blocks of land with areas of, respectively, 195 acres and 800 acres. The former block appears to be far too steep for Australian cattle to graze on. It is situated on the same slope as Portswood, and between it and another estate, both of which are planted with cinchona. It is also proposed to buy or lease certain lands in the Elk Plains. The Elk Plains consist of patches of patana in the middle of large unbroken blocks of jungle, the proportion probably being about two of forest to one of patana, and not as stated in the application forwarded to me, one of forest to two of patana. The applicant also offers to abide by such rule as may be fixed for clearing or leaving trees of a certain girth.

I regard the sale or lease of any land as most inexpedient. Applications to buy this land have already been refused; and at a time when all the available forest will be required for fuel, and as a climatic reserve, it will doubtless be considered inadvisable to make a special exception in favour of any one individual. Selling or leasing the land with certain conditions attached regarding the trees is impracticable; supervising the lessee's operations would cause endless disputes if properly done, and it could never lead to satisfactory results, financial or otherwise; nominal supervision would be worthless, and I trust that Government may decide to preserve intact one of the most beautiful and characteristic features of Ceylon hill scenery.

124. *Importance of having timber and fuel reserves near Kandy and Badulla.*—Attention must also be directed to the formation of reserves for fuel and timber in the vicinity of Kandy and Badulla. Near Badulla there are a few small patches of forest remaining which must be made the nucleus of larger blocks. If there is no forest left near Kandy, blocks of chena scrub must be reserved and gradually converted into forest, both for fuel and for building-timber. It is scarcely creditable that such large and important towns should be entirely dependent for fuel on the small bundles daily brought in on pingoes from village chenas at considerable distances. The commoner building timber comes from private gardens, whilst satinwood and other good woods have to be brought, through Colombo, from distant outports.

125. *Protection of the Kandy and Badulla water supply.*—At Badulla, the northerly slopes south of the town, and which supply the town springs, might be advantageously planted, instead of the grass and scrub being annually burnt off; likewise, the valley which collects the Kandy water supply might be planted. In the former case the land belongs to the Crown; in the latter, the abandoned estates could probably be purchased, and the protection of the sources of the water supply might be combined by the Municipality with a timber and fuel reserve, which would soon repay the cost of the outlay.

RESERVED FORESTS IN THE DRY ZONE.

126. *Possible objection to forming reserved forests.*—I shall be met, in speaking of reserved forests in the drier parts of the Island, by the objection that when forests are so extensive no

* Filed at the Surveyor-General's Office.

reserves are required, or, that the good woods being so scattered over the whole area, it would be useless to attempt the selection of timber reserves. That chena cultivation and land sales in these parts of the Island have not caused so much destruction as along the western coast is evident. Population is scanty, and the chena cultivators are easier to control. The selection of reserved forests is no doubt much less urgent here, but there are unmistakable signs that the area of forests is gradually diminishing with the increasing prosperity of the people, and that we are being driven further and further away from the seaboard for our timber. Official reports, beginning from Sir H. Ward's time, abound with evidence to this effect, and however efficient our control may be, it appears almost impossible, when each member of the rural population sows a certain extent of dry grain every year, to prevent the forest gradually being cleared. In the case of one village the effect is small, but when this happens in several thousand villages, the annual progress made is very sensible.

127. *Land Sales. Necessity for assisting the natural reproduction.*—Land sales, again, form an important factor in the diminution of the best forests, and Government cannot with confidence continue to sell land until it feels fully assured that all those areas best suited for the timber supply have been reserved.* The natural reproduction of all the best woods being so defective, it becomes a mere question of time how long the supply of timber lasts. The delimitation of the forests will not in itself assist the natural reproductive process, although it will prevent destruction. But the areas selected will be those in which the natural condition of soil, vegetation, &c., are most favourable, and where, instead of working in the dark, we may rest assured that any artificial assistance will meet with the best chances of success, and that, instead of being lost sight of by our successors, and perhaps sold or chenaëd, all our present works of improvement will form centres for future work.

128. Again, in the interests of the local inhabitants alone the preservation of a certain area of forest is most important, even if State interests and all climatic reasons be neglected. Taking the Eastern Province as an instance, the population cultivating paddy along the coast depends largely on cheap and easily obtained supplies of fence sticks, timber, &c. Gradually the forest line is being forced back. How will the future welfare of these people contrast with the present when they have to go much further inland for wood?

129. Any one of these reasons appears of sufficient weight for the early demarcation of reserves, especially when it is remembered that in countries where the area of forest is most limited, and where an encroachment on Crown land or the clearing of forest constitutes a criminal offence—the reverse of matters in Ceylon—this plan alone has been found the only effective one for stopping forest destruction.

130. *Area of good forest much exaggerated.*—Statements as to the extent of good forest, such as would be considered worth forming into reserves, have been much exaggerated, and although I do not feel competent to express an opinion as to the area suitable for reserved forests, I am convinced that many large areas, popularly supposed to be covered with good forest, will not be found on further examination to be of great value.

131. *Difficulties in the selection of reserved forests.*—The selection of reserved forests in the drier forests of the Island, where there is so little to direct the eye, and where the whole country is covered with tree growth in some form, will be difficult. Of large tracts we at present know little or nothing; and the close-grown nature of the vegetation, and the want of communication, will render exploration slow. From a distance chena scrub has the appearance of good forest, and this, combined with the great variety in the forest stocking, will necessitate a laborious examination of the whole area before we can determine what portions to reserve.

132. *General principles in making the selection.*—With so large an area of forest to choose from, in which the saleable and unsaleable timbers are mixed in every proportion, it will be necessary to lay down distinct general principles as our guide in deciding what forests to include in the reserves.

133. The woods saleable at present are ebony, satinwood, halmilla, yavarani, milla, and palé.

The reproduction of ebony, satinwood, and halmilla.—Of ebony, the stock remaining is very small: there is a great absence of young and middle-aged trees to take the place of the older ones that are cut out or die. The demand for good timber is steady, and the prices sufficiently high to render careful conservancy remunerative. Of satin and halmilla, the consumption in the past has been small in proportion to the area of forest, but yet much in excess of what it can be expected to yield, unless improved management aids in securing better reproduction. The demand for both of these woods is large, while the production of satinwood is, as we have seen, insufficient to supply the railway with sleepers. Energetic measures are necessary, not only to increase the future yield of these three woods, but to prevent the ordinary supply running short.

134. *Yavarani, Milla, and Palé.*—Yavarani, milla, and palé are only used in limited quantities. The two first are always mixed with satinwood, ebony or halmilla, and in demarcating a forest containing any one of these, yavarani and milla would generally be represented. The reproduction of both is good, compared with that of satinwood and ebony. Palé grows with ebony, satinwood, and halmilla in many places; but the best forests are along the sea coasts, and in the Northern Province, where palé is found mixed with the inferior woods, such as vedekanari, wild mango, churapunné, &c. Along the eastern coast from Hambantota to Mullaittivu, and north of Chilaw, palé originally formed mixed forests for some miles inland, with satinwood and halmilla, and sometimes ebony. The latter have been cut, and there are now, as over the greater part of

* Not only best as regards standing timber, but superior in position, soil, &c., as well, the first not being always the most important factor.

the Northern Province, large forests in which palé is the principal tree. None of these woods are in sufficient demand at present to require any special protection, although, as in the case of those along the Mahaweli-gaṇga in Tamankaḍuwa, forests offering special facilities for transport ought to be reserved. If palé sleepers are finally adopted on the railways, large reserved forests of that tree will have to be taken up to supply timber for the purpose. But, generally, we may confine our attention to the forests having ebony, satinwood, or halmilla, and do this with the greater confidence, as in all of these we must necessarily include more or less of the other woods.

135. This will facilitate the selection of reserved forest considerably, and reduce the area over which they will be distributed. Ebony and halmilla are to a great extent trees of local *habitat*, only growing in certain soils and positions, and experience very soon teaches where they are likely to be found.

136. *All good forests may be selected if easy of access.*—At present the area of forest in which these three trees, either collectively or singly, form a fair proportion of the standing growth, is so small that, bearing in mind the essential point of easy export, we may safely demarcate all the forests in which any of these trees grow well. As the work progresses, if this area becomes too large nothing is easier than to eliminate the worst.

137. *No distant forest to be reserved.*—It would be useless to demarcate forests so difficult of access that timber could not be carted down to the sea coast except at excessive cost—and the area of reserves will probably be largely restricted by the distance from the coast and the cost of transport. The work of selection will necessarily occupy many years, and as work progresses many circumstances are likely to occur which may cause us to modify our views.

138. *Difficulty in estimating the probable area of reserves.*—The general examination of the forests has been too much neglected up to the present for me to make even the roughest guess as to the probable area of reserves. There are enormous areas, such as the Willachiya kóralé between Anurádhapura and the sea, and the north-east corner of the Island between Elephant Pass, Mullaittívu, and the Northern road, which have never been even visited by a forester, but where reports lead one to expect very fine forests.

In making forced marches through the forests with little previous systematic examination to assist in forming a general impression of the forests and their distribution, I could only hope to gain a general idea of forest distribution. I have, however, endeavoured in the concluding portion of this report, specially descriptive of the forests, to indicate the position of those areas most suitable for forming into reserved forests. It would be useless to enumerate them here seeing how little definite information can be afforded.

THE PROTECTION OF OTHER FOREST AND WASTE LANDS.

139. *Objects in view.—Limit as to number of reserved trees.*—Our attention here will be directed to the protection of a few kinds of timber, the prevention of unauthorized chena clearings, and the sale of forest produce.

In selecting the timber trees to be reserved, no attempt should be made to protect more than six to eight in any case. Our object is to prevent saleable timber being cut indiscriminately by villagers and others who go to the Crown forests to supply their ordinary domestic wants, which can be satisfied as well by taking the commoner kinds.

140. *Reserved trees in the Dry Zone.*—For the forests of the dry zone, the trees most requiring protection are ebony, satinwood, and halmilla; of secondary importance are yavarani, milla and palé. These six should be considered reserved throughout the dry zone, which will comprise the whole of the Northern, Eastern and North-Central Provinces, the Puttalam District and those parts of the Kurunégala District north of Deduru-oya and the Dambulla road, and the Hambantota District. The only exception to this rule is that tammana should be added as a reserved tree in the Puttalam District. The timber of all these can be readily recognized, and in each case there is some special reason which compels us to afford protection; for instance, with palé, although there is no reason at present for considering it in the formation of reserved forests, the extensive loppings which all palé forests undergo at the ripening of the fruit necessitate protective measures.

141. *Reserved trees in the Moist Zone.*—In the forests of the moist zone the selection of trees must vary according to the vegetation in each district, but as uniformity is so desirable, I would recommend the following trees being declared reserved—for the first year or two, at least—in the Western Province for the whole of the Kurunégala District south of the Deduru-oya and the Kurunégala-Dambulla road, also for the Galle and Mátara Districts in the Southern Province:—jak, del, lunumidella, hora, milla, mendora, liangu with calamander, nedun, and teak.

Calamander and nedun are so rare that their being reserved will not cause any difficulty. I include teak, as, although only a naturalized tree, its gradual spread on the western side of the Island is of the greatest importance.

142. *Central Province.*—For the Central Province, the following distinctions are necessary. The Mátalé District and the portions of the Badulla District under 2,000 feet elevation, and the easterly parts of Dumbara: ebony, satinwood, halmilla, palé, milla and possibly wá; the rest of the Central Province: wal sapu, dúna, keena, dawata, jak and wá.

143. *Uniformity most necessary.*—Future experience will doubtless suggest some modifications in these lists, but I trust the great importance of uniformity will always outweigh any temporary local difficulties. There must be no possibility of any misunderstanding.

144. *The cutting of trees not reserved.*—The reserved trees should only be cut on permit signed by the Forest Officer, who will levy the usual royalty. To supply their personal wants, the *villagers* should be allowed to cut all other trees without payment. Whether before doing so a permit should be obtained, is a matter which must depend on local circumstances. In parts of

the North-Central Province it would be useless making such a regulation, whilst near the town of Anurádhapura, and in the more populous districts, it will be absolutely necessary. A certain limit must be laid down within which a villager may supply his wants—say within a two-miles' radius round his village, if certain forests cannot be specified. There are many questions of this sort which will require gradual adjustment as forest organization proceeds. They will, of course, be decided by the local authorities, who will draw up rules for the management of the waste lands. The latter will have the force of law on receiving the sanction of the Governor, under the powers reserved to him in the Forest Ordinance.

145. *Prevention of chenas by allowing cultivation only on permit.*—To suggest measures for preventing unauthorized chena clearing is outside the scope of my report, but I may be permitted to point out that if chena cultivation was only allowed on permit, it would be possible for the Forest Officer to check it and to see that it was paying revenue—the last contributing in no small degree to restrict the areas. Under the system by which the headmen only send in lists of chenas, assessing the area or the value of the crop, it is impossible for a Forest Officer or anyone else on going to a certain chena to say whether it is authorized, and whether it is paying revenue in proportion to the area cleared. If every man could be called on to produce his "patta" or permit, some control might be exercised.

146. *Assistance might be rendered by the Forester in checking chenas, if he is supplied with a copy of each permit issued.*—With the Forester of each Province acting as the Government Agent's assistant, a system might possibly be inaugurated under which no chenas should be allowed on Crown land without a permit issued from the Government Agent's Office, where a copy of all those issued would be given to the Forester. Applications for the clearing of any but chena scrub would then be made the subject of an enquiry by the Forester first. Mr. Fisher, the Government Agent of the North-Central Province, has further suggested a system by which the issue of chena permits should be undertaken by the Forester, directed by the Government Agent. But I fear until we are able to allow one forester for each district, instead of one for each Province, this will scarcely be feasible. There appears, however, no valid reason why, if chenas are only allowed on permit, they should not be checked by the Forester. He will not attempt to visit all chenas, but quietly marching about in all parts of the district—chiefly of course in those where the forests are and where most harm can be caused—whilst doing ordinary forest work, no one will feel safe from a visit. It must not be supposed that it is intended to usurp the authority of the District Officer, for when, in the first place, the Forester will be subordinate, the dignity of the former is not likely to suffer. The sole intention is to provide means by which the Forester can at once procure reliable information on which the Government Agent can base his decision, saving an unsatisfactory so-called enquiry through a local headman, the outcome of which is a foregone conclusion if the culprits are not absolutely penniless.

SALES OF FOREST LAND.

147. The question of the sale of forest land is a most important one in connection with the forest policy of the future. To discuss the question generally would be beyond the purposes of this report, which can merely draw attention to the impolitic system of selling land at less than the intrinsic value of the standing timber, *when it is well known* that the only object of the purchaser is to make money by selling the wood.

The future successful working of the forests, certainly of those in the moist zone, hinges, as has already been stated, on the question—Is Government prepared to put such restrictions on the sale of forest land as will protect the Crown timber monopoly?

148. The sale of forest land at inadequate value was alluded to by Sir W. Gregory in his letter of July 31st, 1873, to the Secretary of State (Sessional Paper XXIX. of 1873), in which he mentions "that fine forest land in the best positions is sold to timber dealers merely for the sake of the trees, a portion of which repay the cost of the land. The block when the timber is cut out is allowed to lie waste and to become overgrown with a close pestilential jungle." The system of selling land to everyone, regardless of all consideration, originated, Sir W. Gregory states, in a wish to make revenue, but the outcry raised immediately any attempt is made to reserve for State purposes and for the public good any land which some individual supposes to stand between him and a fortune, is perhaps more to blame.

149. *Land professedly bought for cultivation.*—Almost all land is professedly sold by Government for cultivation or planting purposes, but at the time of the sale no declaration is made of the purpose for which the land is bought, nor are any conditions attached to its purchase. The only attempts made hitherto to secure a fair price for the standing timber have not been successful owing to the want of purchasers, when even a low valuation price is asked for the timber. The purchaser says that he only wants the land, and, anxious to further all planting enterprize, Government allows the land to be sold at the upset price of Rs. 10 an acre, *plus* Rs. 2·50 survey fees. After the purchase is concluded, the buyer, as happened recently at Kalutara, sometimes turns round and offers to sell the wood to Government which he had previously declared valueless to him.

150. *Sales of land not to be stopped.*—To refuse to sell forest land because it has a large amount of standing timber would be absurd if there is more than sufficient for the timber supply.

Most considerations should give way to the proper development of the country, but what I would beg to point out is, that selling Crown land regardless of all present and future considerations is directly antagonistic to the true interests of the Colony. The immediate necessity for a small revenue cannot be so great that, with timber worth on the spot (say) £10 an acre, land must be sold for the upset price of £1, only to benefit a limited class of extortionate timber dealers. Land is, of course, not sold entirely to benefit the latter, but they are the only persons who

would be affected by any conditions as to cultivation, &c., being attached to the purchase. It is impossible in Ceylon to do what is done everywhere else—to discriminate between persons who genuinely mean to open up the country, and those who intend to cut out the timber and then to abandon the land. I think the only answer can be that State interests must in no case suffer. It becomes, therefore, a question as to what arrangements are possible for selling forest land without checking the planting enterprise.

151. *Purchasers of timber land. Planters.*—There are two classes of persons who have bought forest land in the Western Province. One consists of timber dealers and others who buy solely for the sake of the timber; the others are persons who buy with the intention of cultivating,* and are glad to get something for the wood—perhaps Rs. 5 or Rs. 6 an acre—to assist in clearing and planting up the land. The timber is bought by boatmen, who fell and take it for sale to the dealers of Grandpass.

152. *Timber dealers.*—The persons who buy land for the sake of the timber are often retail timber dealers themselves or well-to-do natives. After all the timber is cleared, the land will be abandoned. These, if they are not timber dealers themselves, sell the timber generally to boatmen, who re-sell it at Grandpass; and although the price paid is rather higher than when bought from estate owners, the practical result is just the same in either case, and the boatmen, working for themselves, with abundant opportunities for plundering Crown land and land purchased by Europeans—who in the interval between the purchase and the opening up of the land neglect to take proper means to protect the timber—can undersell the Government Forester, who has to bring his timber a longer distance from the river bank and to employ hired labour.

153. *A general depreciation of Crown property results.*—The loss to the Crown is not, however, confined to the value of the timber (say £10 an acre); but all other forest produce for a time being is valueless and unsaleable, and forest property consequently is generally depreciated. Can further damage to the present and future interest of the Colony be stayed without hindering the extension of cocoa and coffee estates? I venture to think that it can.

154. *The selection of reserved forests, and some discrimination in making land sales necessary in the interest of all.*—It may be suggested that absolute freedom in the selection of Crown land is necessary for the development of the country, and under an erroneous idea that this, the formation of reserved forests, and the working of the timber trade by Government agency are incompatible, it may be proposed that matters should be left in their present state. If there were a scarcity of land for cultivation, we might hesitate before putting aside large areas as forests. This is not the case, and the selection of those forests best suited for the State purposes cannot materially affect the planter. As long as free access is secured to the river or the road, it does not matter much to the latter whether his land is on the river bank or one mile inside. If the Crown has to cart its timber two miles to the river bank, it means that the timber work cannot be done at a profit. By abandoning all idea of working the forests (for I need scarcely say that only to protect them would be most difficult and expensive) the planting interests would not benefit, but ultimately suffer. The areas of forest are rapidly decreasing, and although the point has not been reached, as in the coffee districts, when we can say there are only so many acres left suitable for tea, &c., our experience there should teach us to guard most carefully all the remaining waste lands for the expansion of planting enterprises. Past results show that if Government were to abandon working the forests, the future timber supply would be jeopardized, the Colony would lose a most valuable source of revenue, the public would be handed over to the mercy of the timber dealers, whilst genuine planting interests must suffer: only the timber dealers would be benefited.

State forest management has not interfered with the fullest development of the country with private enterprise in India, and there is no reason why it should in Ceylon, if we go to the trouble of developing a practical system for the management of Crown properties, their sale, &c., and then steadily adhere to the lines so laid down.

155. *Difficulties at present attending the purchase of Crown land. Indecision regarding the reserved blocks.*—First let the State decide whether it will keep any areas, and what these shall be; not, as at present, to have only a vacillating policy—to allow blocks to be selected and surveyed, at some cost and trouble by intending purchasers, and then, after a lapse of some months, at the last moment to withdraw them from sale or to fix a high reserve—as in the Kalutara District, of Rs. 55 an acre. This can only tend to turn the right sort of settlers away, especially when they feel no certainty that the blocks they have selected with great trouble will not be sold at some future time. Someone may agitate or refer the matter to higher authority, and then the land which we now decline to sell at less than Rs. 55 an acre may be secured, as at Kalutara, for Rs. 10. If the State decides to keep certain areas, let it select them, and forming them into inalienable reserved forests clearly define the boundaries. Having done this, intending buyers may safely be told that they are at liberty to select any but the reserved blocks, the boundaries of which are so and so, and that what they select may be bought at such price as may be thought proper, but that neither now nor at any other time will the reserve be reduced.

The price paid for the land is an unimportant item if it is really to be brought under cultivation, and after having made the State forest reserves, sooner than check the opening up of the country it would be far better to make free grants of land.

156. *Object in drawing attention to the subject.*—It is more with a view of directing attention to the effect of the unregulated land sales on the forest revenue and on the present and future welfare of the Colony that I have ventured to enter on the subject at such length. As soon as

* It is worth noting here that planters and European capitalists invariably pay high prices for land, and that it is only when the land is sold cheap that the native timber speculator bids up to Rs. 12 or Rs. 14 an acre.

Government and the public can be brought to see that State forest conservancy is so far from being incompatible with the fullest development of the country's resources—is absolutely necessary for the permanent welfare of every country, there is little fear that a correct and practical system will be at once inaugurated. If this is not done, and the question is neglected or shirked under the idea that the present absence of system is best calculated to secure the present and future interests of the Colony, the results will be most disastrous, the reverse of those anticipated, and also mean a considerable loss of permanent revenue.

157. *No forest land to be sold until the reserved forests have been selected.*—It may not be out of place to make the following recommendations as to the future. In the first place, no forest land should be sold until we have decided what to keep as reserves. The impolitic system of allowing purchasers to buy the land best situated before that required by the State is selected need not be further alluded to.

158. *Sale of the forest land which is not reserved.—The land and the standing timber to be sold separately.*—Having selected our reserved forests, the rest of the land might be offered for sale. In protecting the interests of the Crown, the chief difficulty will be in connection with the sales of forest land in the low country, where the timber is a marketable article. The upset price of Rs. 10 an acre, plus Rs. 2·50 survey fees, was originally fixed for the sale of land, under the idea that it would be brought into cultivation. The timber revenue was then little thought of, and although forest with marketable timber was sometimes sold, it was the exception, and sales have, I believe, only taken place on a large scale within the last ten or fifteen years. It usually mattered little to the buyer what timber was on the land; it had all to be burnt, and the price paid was really for the soil itself. It is this principle that I would suggest being followed now. If the buyer wishes to have both land and timber, let him have them by paying also a fair market price for the latter. If this is done, sales of land for the sake of the standing timber will, as past experience teaches, immediately cease. If the buyer only wants the land—the soil on which to grow his crops—let him stand on the same terms as the coffee planter in (say) Maskeliya. Let him pay the auction sale price for the land, without making any use of the standing timber except for estate purposes. He will then probably get the land for rather less than if it was sold with the standing timber, and his actual position will not be much changed. On the other hand, the Colonial forest revenue will benefit largely by an enhanced price being offered for the produce of the remaining reserved forests. The purchaser of the land will not, as now, make money by the sale of the timber, but as the price he receives is nominal, the change will affect but little those persons who really mean to open up the country. These latter will no longer serve as an excuse for indiscriminate sales of forest, which result in an injury to the general interests of the Colony the extent of which it is scarcely possible to estimate. If this suggested change does in any way hinder the opening up of the country, the revenue from land sales will of course fall off, and it is necessary that the difference between the area sold and that brought under cultivation should be remembered in judging of results: it will be easy for Government to make concessions quite as beneficial, without affecting the forest revenue and the requirements of coming generations.

159. *Conditions to be attached to the sale of forest land.*—As soon as the two distinct elements, the land and the timber growing on it, are recognized in making a sale, and Government determines to work the Crown forests on behalf of the Colony, and to maintain the timber monopoly, the only course open appears to be that a bond be taken from the purchaser binding him not to sell or allow any of the wood cut on the land sold to be removed, although he may make such use of it as he sees fit, for building, &c., on the land.

This will mean that most of the timber is burnt, as in the hill coffee districts, and although the waste of so much good material should be avoided, if possible; it must occur everywhere when the area of forest is more than sufficient for our requirements. We may safely do it when our future timber supply is provided for by large reserved forests. To see that the terms of the sales are kept to, we shall trust to the control of timber before removal and during transit. At the same time, all sales of forest land *except for cultivation* would appear inadvisable.

160. *No other course practicable.*—The only other alternatives to this course that suggest themselves are as follows. Neither can be recommended.

Adding the value of the timber standing to the price paid for the land. Apart from the difficulty of estimating this value, a fair market price would be prohibitive to genuine planting enterprise.

Cutting the wood by Government agency off the land before sale, or the sale of the wood to Government. This would be impracticable. The reserves will give as much timber as we require.

161. *The public will benefit by securing a cheap supply of timber in the Government depôts.*—In considering this suggested solution of the difficulty, it may be supposed that the destruction of much wood, and the refusal of Government to sell standing timber at less than its fair market value might result in a timber famine and in a great rise in prices. Such need not be feared.

The true policy of forest management is to supply the public with an abundance of timber at a fair price—not to choke the demand with prohibitive prices, but to stimulate consumption by placing good and cheap timber within the reach of all.

162. *Combination at present amongst timber dealers to keep up high prices.*—Greatly as the Crown now loses by the sale of forest land, the public derives no benefit owing to a combination amongst the timber dealers to maintain high prices.

The following statement shows the prices of timber:—(*a*) charged in Government timber depôts at Puttalam, (the carriage of timber from the latter place to Colombo is 20 cents per cubic foot, and the Government forest officer is willing to deliver it in Colombo for that);

(*b*) the lowest of five tenders recently submitted to the Colombo Municipality; (*c*) the prices now paid by the Chief Engineer of the Breakwater:—

	Puttalam. (*a*).—Per cubic foot. Cents.	Colombo Municipality. (*b*).—Per cubic foot. Rs. cts.	Breakwater. (*c*).—Per cubic foot. Rs. cts.
Jakwood	—	2 0	2 25
Milla	80	2 0	2 0
Halmilla	80	—	2 0
Satinwood	70 to 80	2 75	1 0 in log 3 50 in scantling
Palé	50 to 75	2 50	—
Hora	—	96*	1 50

The prices paid by private consumers are slightly, but not much, lower. The immediate result of Government assuming the command of the market will be a considerable fall in prices. We shall try and sell as much timber as we can, at a moderate profit.

CHAPTER VIII.

ORGANIZATION OF THE STAFF.

163. *Necessity for an efficient staff.*—A good Forest Ordinance of itself is not sufficient to produce satisfactory results. The law must be administered intelligently; the principles of forestry must be fully recognised, and a good system based on them, established under the control of the Government Agent; a staff of efficient forest officers must be organised who know their profession and take an interest in their work. If all these conditions of success are secured, then it will be possible to manage the reserved forests and other waste lands so as to secure their full and lasting benefit to the country.

164. *Existing staff. Want of supervision.*—The formation of an efficient staff is one of the most important conditions, and before going into suggestions for the future, it will be best to examine the present system. The Foresters, appointed at different times since 1876, have been made subordinate to the Government Agents in charge of the Provinces, and also partly subordinate to the Assistant Government Agents. But whilst in one Province the Forester has been left entirely to himself, without supervision from the Government Agent, either from want of time or from confidence in the subordinate, elsewhere undue interference may be made with petty matters of detail. Many officers might no doubt be trusted to work without any control, but it is not right that a systematic check on the working generally should be wanting, and that the Forester should be left entirely to himself. In some cases the officer, contrary to his own opinion, has to carry out a policy which his own experience shows to be wrong, yet the Agent's wishes must be final. Again, the Forester may make great mistakes, and in the absence of some competent authority to supervise him and to advise the Government Agent, immense harm can be done, and has been done in late years.

165. *Separation of forest work from the Executive Revenue Branch.*—The idea of separating the administration of forest affairs from the control of the Government Agents has been suggested, and its application would at first sight appear advisable in considering the position of each of the Provinces, and the general local conditions regarding the sale of forest produce, &c., &c. If the administration of the forests had in the past formed the work of a separate department, several important advantages would have been secured, such as will suggest themselves to anyone who has read the account of past work. The bad results of the share system, and the overstocking of the market, would all have been obviated.

166. *No advantage has attended the existing provincial system.*—I am far from advising any centralization of the work, but it would be difficult for any advocate of the provincial system to point out in the work of the past one single advantage which has attended it. Forest work up to the present has not included forest conservancy, planting, and improvement. In addition to the carrying out of timber works, it has merely concerned itself with timber cutting and selling; and as a large commercial business, possessing a valuable monopoly in an article of universal demand, it may be taken that if it had been conducted as a whole, and if some common sense had been shown in the direction of affairs, that the commercial results would have been less unfavourable. Nothing certainly could be worse than the existing arrangements, considered in connection with results in the past; the future prospects which they offer are even less re-assuring.

167. *Economy attending management under a separate department.*—If work had been carried on by a separate department, there would have been not only an absence of purposeless competition in the timber market between different Provinces, but likewise considerable economies in establishment and in working. Instead of adhering to the present provincial divisions, which, however well-suited they may be for general administrative purposes, are as ill-adapted for economical forest management and effective control as any that could be made, workable foresters' charges would have been formed to correspond with the natural condition of the country and the lines of export. A general development of the timber trade, especially that on the western side of the Island, would have resulted from affairs being directed by a departmental chief endeavouring to show good financial results; and we should have the timber business in a much healthier state than at present, when the market is glutted and work scarcely pays its way.

168. *No progress made in developing a system for forest protection, &c.*—It is on the forests

* Used for the Bridge-of-Boats. Rs. 1·25 had been paid for years until the Government Agent, Western Province, recently offered to supply it at Rs. 1·06. The contractor having the wood in stock, was compelled to underbid this offer.

themselves that the provincial system should have the best results, if properly developed; yet in forest organization no progress has as yet been made, no means have been taken to combine the general system of revenue administration with that of the forests: the Forester, in carrying out the work, has generally been quite as isolated as if he had no direct official connection with the Government Agent. Under the old license system the responsibility of control rested with the headmen, and although uncontrolled it was not infallible, it would now, if carefully developed by the Forester, give valuable aid in preventing theft and damage. In some Provinces the headmen have been relieved of this duty, and the entire control rests with a solitary individual—the Forester—whose authority no one acknowledges, and whose position in some Provinces is most derogatory to his office as a member of the provincial staff.

169. *A radical change necessary.*—In whatever way we look at the present arrangements, a radical change appears advisable. Matters of secondary importance—the working out and selling of timber—have occupied the entire attention of the Foresters, and have proved, commercially, a failure, whatever results figures may show—although here we may almost question whether the old license system would have not given equally good results—whilst the primary importance of forest organization and improvement has been entirely neglected. Notwithstanding the fact that the general failure in the natural reproductive process has always been noticed by every unprofessional observer, we have entirely concerned ourselves with the sale of forest produce, using our best endeavours to clear out the latter as rapidly as possible without the least thought for the future. Under a departmental system, these matters could not have met with greater neglect, and under it we might, in addition, have had the working out of forest products by Government agency developed into a workable system, instead of merely having replaced the old license system by arrangements remarkable only for their want of method, and for a disregard of the most ordinary common-sense precautions.

170. *If the sale of forest products our only object, then a separate department is preferable.*—If future forest work is to mean, as in the past, only the sale of forest products, or in other words, if it is to degenerate into a timber-trading business pure and simple, thereis little reason for hesitating as to which system would pay best—one in which all operations would be directed by a thoroughly capable business-man, or one in which, as at present, each Province would work on a separate and disconnected plan. But timber work is not our sole object in the management of the Crown forests. The principal objects of forest conservancy are the efficient protection of the forests, with systematic measures for assisting the growth of timber, and for increasing the productiveness of the soil, instead of only cutting down the natural forest growth without the least thought as to how it will be replaced.

171. *Disconnected working the great failing in the past.*—In a careful study of past forest work in Ceylon, everything points to a general want of system. The forest work in each of the Provinces has been quite disconnected from that going on elsewhere. Each of the Provinces has been working as if it formed an independent State, surrounded by hostile neighbours; there has been no combination for the common good or for the good of the Colony. Emulation to a certain degree is most desirable, but for one officer to refuse all information regarding his work to his colleagues, to waste time in disputing about a small piece of provincial boundary, or gravely to assume personal merit because he can, by paying his contractors exorbitant rates, bring larger ebony logs to market than his neighbours, can only be regarded as absurd. The ebony grew long before British rule began in Ceylon, and the mere fact of fine timber being left in one part of the Island is solely due to its position remote from the seaboard.

172. *Position in which the Foresters were placed.*—Considering everything, it is perhaps remarkable that the past results have not been more unfavourable. The entire forest work was entrusted to young officers, who had to fill a most difficult position. They had no experience of forest work, and with only temporary tenure of office the vast forest properties were handed over into their charge; they were told to make revenue, with the general understanding that the permanency of their employ or their promotion would depend on financial results. Until now no enquiry has been made as to how these results have been attained.

173. *No real comparison of results.*—No means were taken to facilitate comparison of methods and of working between the different Provinces, and when the brief abstract of revenue and expenditure attached to the annual report showed one Province to have made more revenue than the rest, it could only be expected that other provincial officers would endeavour in the following year, at all cost, to keep pace with their more fortunate neighbour. Revenue at all cost has been the guiding principle throughout. How it was obtained no one cared to enquire, nor, what is still more singular, was it possible to ascertain from the accounts. Government property was removed without a record being kept, or without any detail being supplied to the central authorities, rendering a large number of the so-called accounts purely fictitious. That it was done in good faith is certain, but if in one year we give away over Rs. 30,000 worth of most valuable timber, which should be accounted for just as exactly as salt or any other Government property, without full details appearing in the accounts, the value of the latter is open to question.

174. *A combination of effectual central control and provincial responsibility desirable.*—It must be considered whether, without breaking up the provincial system, we can combine with it the many benefits of competent central direction of forest affairs. The advantages connected with the provincial system, if properly developed, are so important when the requirements of State forest policy are considered apart from the sale of forest produce, that they appear to outweigh all those we might hope for under an entirely separate forest administration.

175. *Separate forest administration a political error.*—The revenue and general administration are already distinct from the judicial branch, and although the advantages of both provincial and departmental management have as yet been missed, I have from the first felt convinced that only by forest conservancy arrangements becoming part of the administrative whole, of which the

Government Agent is the centre, could any distinct advance in forest work be looked for. An independent department would be valueless. It could never make any real progress, and would only be a continuation of the present timber-trading business, without much opportunity, except at great expense, for developing the more important work of forest organization and improvement.

176. *Difference between India and Ceylon.*—The advocates for forming an independent department of forest administration have taken their ideas from India and Europe, without making any allowance for the difference in circumstances. In Bengal the forests are administered by a separate department, working independently of the district authorities; but although good results have been obtained, it has been often only at the cost of heart-burnings, friction, and waste of labour. But in Bengal generally, the influence of the European is much greater, and the village system more completely developed than in Ceylon. Here the European commands little or no respect unless he is a senior executive revenue officer; the influence of the village headmen over the people is comparatively weak, whilst no one appears to acknowledge any orders but those of the Government Agent.

177. *Departmental system expensive and less effective.*—Unless, therefore, the work is carried out in the name of the Government Agent, the Forester must work alone, with neither headmen nor the people acknowledging his authority or that of his subordinates. In this way the principal objects of forest management would be missed, or only secured if we were able to maintain large subordinate establishments, and we should then do less effectually, at great cost, what might be secured through the influence of the revenue authorities judiciously applied.

178. *Economical protection by utilizing the subordinate revenue establishment.*—Another important advantage may be gained by adhering to the provincial system. The finances of the Colony will not admit of any large expenditure on a subordinate staff, so that we have to consider what will be the most effective and at the same time the most economical arrangement for protecting the forests. Up to the present the control of the headmen in the protection of Crown forest or in checking the transit of timber has not been effective, because there has been neither system or supervision; but the fact remains that we have a large body of men in every district who, if controlled, can, under the Timber Ordinance, and by the influence of the revenue authorities, be made of great use in protecting the forests. To utilize the services of the headmen effectively, it is of course necessary that all work should be under the orders of the Government Agent.

179. *The objects we have in view only attainable by means of efficient central control.*—Many advantages might result from the formation of a separate department, but to attempt it would be a grave error in many ways, unless it is impossible in some way to secure an uniform system of working in all the Provinces. What we require is correctness of principle, uniformity of system (and consequently economy of working), and continuity of action.

It will be seen at once that these objects can only be secured by having some authority in a position to advise on all matters of management and forest policy, able to direct the working, and to see that the methods utilized are best calculated to be effective and economical. This authority must also be in a position of sufficient influence to enforce uniformity of system—varied, of course, according to local requirements—being carried through continually, and not liable to be changed according to the special views of each provincial officer. All the forests in the Island must be worked as a whole, the Provinces not only working on the same system, but the working in each made subservient to general interests. Nothing is of greater importance than the latter. We should otherwise have a mere repetition of the last few years. The felling and sale of timber must be controlled by responsible and competent persons able to judge of the requirements of the market.

180. It is requisite that the forest system should be gradually and uniformly developed, and that the selection of reserved forests, demarcation, &c., should not be entirely neglected in one Province because the present Government Agent thinks this step unnecessary. The more each Province can contribute towards the general fund the better, but forest revenue is distinctly imperial or colonial, and not provincial. The question is not how much revenue can one Province make as compared with the rest, but rather how can the Government best husband the resources of the Colony and at the same time turn them to the best advantage with the minimum of expenditure of money and material. Comparison between the Provinces as regards financial results only is worthless, and I can but express surprize that this should not have been seen before. The Western and the Central have given up the natural advantages which they possess to further other enterprise, and cannot now show the same nett returns of forest revenue as (say) the Eastern. But if comparison is really required, then all forest operations must be taken in account, the selection of reserved forests, works of improvement, &c. The one that has completed the selection of reserved forest first, and, instead of discounting the future, is devoting all its energies to general works of protection and improvement, is obviously much nearer the ideal, than one that can show an annual nett profit without expending any money in replacing what has been removed.

If these objects can be kept in view by some system, which, whilst being effective, will work harmoniously with the provincial arrangements, the responsibility for carrying out the details should remain, as at present, under the sole control of the Government Agents.

181. *The form of the central control.*—The form which it has been suggested that this central control should adopt is that of a head forest officer (or, adopting the Indian official designation, a Conservator of Forests), or of a Forest Board. The latter suggestion has been made scarcely appreciating the duties which would be required, and under the supposition that the authority of a Board would in itself carry greater weight than that of a single officer. It will be well to consider what the duties will be.

182. *Competent advice in forest management required by Government.—A general system of management to be developed and persisted in.*—For the Government in Colombo a competent adviser is required experienced in forest organization, competent to advise in all matters of forest policy

and management, such as are daily coming before it. In the first instance, correct fundamental principles must be laid down, which must be applied in the different Provinces. It will not suffice for certain rules to be issued regarding forest work, leaving them to be applied to local circumstances by each Government Agent, assisted by the Forester; but an officer is required, who, without interfering too much with matters of detail, will be competent, after satisfying himself as to local requirements, to advise on the provincial details throughout the Island, and combine the whole into a complete system. This is but one of the duties connected with the office. Another is to secure continuity of action, to see that the same principles which are now laid down after due consideration are carried through and thoroughly developed by each succeeding Government Agent and Forester. If forest management is to result in any permanent benefit to the country, means must be adopted for seeing that the work now commenced is systematically carried out, and that in carrying it out the same lines are always followed; that the advance made under one officer is not lost under his successor, whose views differ as to the direction in which we should work.

183. *Supervision over the Forester necessary.*—In the past we have seen that it is not sufficient for Government to issue rules, or for the Government Agent to order them to be carried out. It is necessary to provide professional supervision to ensure orders being obeyed, and that the work generally is conducted with due economy and care. Most revenue officers take the greatest interest in forest work, and great pride in making it a financial success; but few have sufficient time or the necessary technical knowledge to see that correct principles are followed, or that their instructions are being obeyed. Over the foresters it is necessary to have a practical man well up in the practice as well as in the theory of forest management. For this purpose the employment of some controlling officer, who has a good scientific and technical knowledge of forestry and timber work, is most urgently required to economize working, and to see that each provincial forester obeys orders. Had such an officer been employed from the first, we should now have had a well organized system.

184. *Effect of the absence of competent supervision in the North-Central Province.*—The want of some control over the Forester could not have been better shown than in the North-Central Province, where the management of the forests has been carefully supervised by the Government Agent, who has always been thoroughly opposed to the share method of working in every form. Yet since February, 1878, up to the present time, the Forester has been working almost entirely on this plan. A return called for from all the Provinces by His Excellency the Governor shows how little Mr. Dickson's repeated orders were obeyed, and how matters really stand. Out of nine half-share contracts current in the Colony for felling ebony, eight, and out of ten other share contracts, five relate to the North-Central Province.

185. *In any case central control necessary.*—Even if in each Province we had a trained forest officer who could be trusted to work on correct principles and to carry out orders, it would be as necessary to provide central professional control able to advise and to combine the provincial details into a general system, besides exercising general supervision. When, however, we have a body of officers who have never had any technical training, it is not likely that in the future, any more than in the past, each will be able to evolve correct methods of working which must, moreover, harmonize.

186. *Central direction still more necessary in financial matters.*—So far the necessity of competent control over the general system is apparent, but when we come to consider the details of working, especially the financial arrangements, the adoption of a system under which the operations of the different Provinces should be directed by the Colonial Government appear all the more advisable. Working out of the details must be left to the provincial authorities, but the general organization must be in the hands of the central Government, who, whilst endeavouring to meet local requirements, have in forest administration, as in other matters, to consider the interests of all.

187. *This control could only be exercised by a professional forest officer working with Government.*—For all these matters, and in others to which allusion will be made further on, the necessity of competent professional advice in the direction of forest work in the future makes itself evident. The services of a competent forest officer are required who is experienced in forest organization and management, and in a position to offer advice to both the Colonial Government and the provincial Government Agents and Foresters. The appointment of a Forest Board to direct forest affairs would, in the absence of such technical adviser, be valueless, and could only introduce new and unnecessary complications, without having so much authority as an officer working with the Colonial Government. To judge of provincial requirements, local circumstances must be studied on the spot with practical experience of forest work. The members of any Forest Board that could be appointed in Ceylon could neither undertake the necessary local inspections, nor bring any technical knowledge to bear in solution of the difficulties.

PROPOSALS REGARDING THE FUTURE.

188. The plan that recommends itself for adoption in the future is that:

(*a*) The provincial system, by which the Forester and all forest operations in each Province are placed under the entire control of the Government Agent, should be retained in principle, although slightly altered in detail.

(*b*) That the appointment of a skilled forest officer be made to advise Government and the provincial authorities in matters of forest management, and to supervise the whole of the forest work in the Colony.

This officer should be attached to the Colonial Government, and whilst his duties would consist in forest organization and controlling the whole of the work in the Island, he would direct a branch of the Colonial Secretary's Office, and not act as if he was at the head of a distinct department.

DUTIES OF THE CONSERVATOR.

189. *Provincial authorities not subordinate to the Conservator of Forests.*—Under this system—by which the provincial authorities, although bound to give the proposals of this officer due consideration will yet in no way be under him—it will, I venture to hope, be possible to combine both the advantages of provincial administration and central direction. Before entering further into the provincial system, it will be advisable to explain more fully the position which this officer, who might be called Conservator of Forests, should occupy, and the duties of his appointment.

190. *No separate central forest office should be formed.*—If the provincial system is retained, it is probable that the Conservator of Forests, working independently with the Government Agents, would have little influence. The latter would be free to adopt the suggestions thrown out or to neglect them, whilst the appeals to higher authority that would of necessity follow, could only lead to much correspondence and waste of time without great practical result. No attempt should therefore be made to form any central office for forest control and management.

191. *Work of the Conservator with the Colonial Government.*—The general control of forest work, as in everything else, should rest with the Colonial Government, which will have at hand a competent adviser in all matters of forest management. The presence of the Conservator at headquarters will ensure the correct principles being followed; in all forest matters coming before Government his opinion will be taken. Having a comprehensive view of the work in all the Provinces, the Conservator will be in a position to advise Government fully regarding the progress of forest work—the failure or the success of the policy laid down.

192. *His responsibility for the general organization.*—For the general organization of forest operations in the Provinces, the Conservator will be responsible, and whilst the initiative of such works as are carried out will usually rest with the Government Agents, and likewise the responsibility in carrying them out, the proposals regarding one Province must necessarily be considered in connection with those made in the other six Provinces before any work is commenced.

193. *The relative position of the Conservator and the Government Agents.*—At first sight the mutual relations of the Conservator and the Government Agents may appear strained, because they are strange and new, but there need be no real difficulties connected with them.

It must be understood that the Conservator is in no way over the Government Agent. He simply acts as the adviser of the Government and of the provincial authorities, anxious to do the best for the Province, and for the general benefit of the Colony. In matters of forest organization and working his opinion will always carry great weight, but should the Government Agent fail to agree with the proposals and suggestions made, he will refer the matter to Government. From the interest which all revenue officers take in forest matters, these differences of opinion are not likely to arise often, especially when it is once recognized that everything must be organized as a whole—the requirements of one Province considered in connection with those of the rest.

194. *Success will depend on the officers who have to inaugurate the system.*—The success of the new organization will necessarily depend in great measure on the tact of the officers who are appointed. For forest work to make much progress in the future, the goodwill and the hearty co-operation of all the provincial authorities with the Conservator are essential. To secure these the management should, as far as is consistent with effective control, be left with the Government Agents, who will take the chief initiative in all works, and interference with petty details of working should be avoided.

195. *Existing arrangements regarding proposed forest operations.*—It will be well to compare the future system under which work will be conducted with that now in force. At present, application is made to Government by each Province for a lump sum for the felling and removing of timber. No detail of the proposed works is sent in, of the timber to be felled, &c.; no forecast is made of the revenue. Work goes on according to the Forester's discretion until the vote is exhausted, and no plan of operations is drawn up for the year. Government does not know what number of trees will be cut, how the money will be expended, or what the revenue for the ensuing year will be.

196. *Future proposals.—Annual plan of operations.*—In future the whole of the work should be arranged by the Government Agent and the Conservator in consultation. At the time when the annual estimates are made, the Forester of each Province, acting under the orders of the Government Agent, will draw up a plan of operations for the ensuing year. This will give full details of the timber to be felled, of the areas to be planted or thinned, and of such other works as may be proposed. Over this plan of operations the Government Agent and Conservator will consult, and after making such modifications as may appear necessary, it will be forwarded for sanction to Government. Accompanying this plan of operations there should be a budget showing accurately the proposed expenditure under each head of works or of establishment, and also the revenue anticipated.

197. *Execution of works.*—When the works which it is proposed to carry out have been definitely sanctioned by Government, and the necessary funds allotted, the responsibility for the execution of the works will rest with the provincial authorities. No further reference to the Conservator will be necessary, and the same freedom of action in the execution of such works as have been detailed in the plan of operations will be secured as at present. Only in acting as the professional adviser of the Government, and in directing the Forest Branch of the Secretariat will it be necessary to inform the Conservator regularly of the progress of all work. It will be only necessary to consult him further if more money is required for any particular work, or if it is proposed to undertake new works, for which a transfer from the allotments of other Provinces will be necessary, or a supplementary vote from Colonial funds.

198. *Working plans to be drawn up as soon as organization is sufficiently advanced.*—As forest organization progresses, the work in each Province will be provided for by a regular working

plan, in which the operations, instead of being detailed for one year only, will be given for a series of years. The annual plan of operations will then be drawn up in accordance with the proposals of this working plan. As, however, the working of the forests under Government agency must be developed into a regular system before we can foresee more than twelve months the state of the market, and consequently of our finances, it will be useless to enter further on this subject. The basis for a working plan is the annual yield of the forests, and of this we as yet know nothing.

199. *Provincial tours of inspection to be made by the Conservator.*—Another most important duty of the Conservator will consist in his assisting both Government and the Government Agent to see that the Forester is carrying on his work satisfactorily. For this purpose, as well as to collect information regarding other matters, the Conservator will visit all the Provinces periodically, and go through the forests with the Forester, informing himself of all matters. He will advise the Forester on the work generally, at the same time communicating notes of the observations made to the Government Agent. On these occasions the Government Agent will frequently desire the Conservator to give special attention to certain points.

200. *Control over expenditure and other provincial details of working necessary.*—The absence of any local control over expenditure is alone sufficient to condemn the existing system. The statements of the Foresters and the financial results have been accepted for the satisfactory nature of the work carried out. No steps have been taken to ascertain whether the sum of Rs. 157,000—which is this year's vote for forest establishments and work—is laid out to the best advantage. Such supervision can only be exercised by placing a practical man over the Forester.

The Government Agents may sometimes have time to check accounts; but when we come to the supervision of each of the technical details of working, which, though small in themselves, mean, according as they are conducted, success or failure, he has neither the time nor the necessary knowledge of practical work. In some measure, therefore, to take this responsibility off his shoulders, the services of a competent officer will, I feel convinced, be as highly valued as they will prove of benefit in contributing to economical working and effective supervision and improvement. A large portion of the Conservator's time—from six to eight months in the year—will be spent in making these local inspections, and in consulting with the local authorities. The rest of the year will be devoted to central organization, office work, and matters of finance.

201. *Central financial control.*—In financial matters it appears very necessary, as has been mentioned, to have well-organised central control. It would be different in a country where the consumption of timber is chiefly local, where each Province could make its own market, and as far as is compatible with the capability of its forests continue to work out forest products without regard to the rest. But in Ceylon this is impossible. We have not only to consider the capability of our forests, but the requirements of the foreign more than of the local trade. If we do not, the price of timber falls and, as work, becomes no longer remunerative.

202. *Fellings and sales require to be in harmony with the state of the timber market.*—Whilst, therefore, the financial results will naturally be kept distinct, in finance, as in everything else, the forests must be treated as an administrative whole. The fellings and sales must be controlled from Colombo, the trade centre, according to the state of the market, and operations must be conducted as they would be in the case of a mercantile firm with branches in the different Provinces.

203.—*A general plan of forest operations, and budget.*—As a first step it is necessary that the annual plan of operations regarding each Province should be consolidated into a general one for the whole Island, and that the budgets should also be united into a regular forest budget, showing distinctly the works which are proposed for the ensuing twelve months, Province by Province, the proposed expenditure and anticipated revenue. When the budget is prepared, it will be possible for Government, arranging the Colonial budget, to see how far the proposed works can be carried out. Only under an arrangement like this, in which the requirements of each Province can be simultaneously and effectively compared with the rest, and under which Government, advised by the Conservator, can feel sure that money is allotted according to the importance of the proposed works, is there any chance of the requirements of each part of the Island receiving due consideration.

204. *Unequal allotments of funds.*—The requirements of one Province must be met by the surplus of another, and not all works of improvement neglected in one Province because it fails for the moment to make any revenue. In the past, the failure to equalize budget allotments drove the North-Western Province to adopt the share system; in the future, it is desirable that the allotments for timber works and establishment should be somewhat more equally distributed. The following shows the allotments for the current year; it would not become me to criticize this, but it will be seen that when prices are unusually low, the North-Central Province, where transport expenses must, on account of its position, be much higher than elsewhere, receives more money to spend on timber works than the other three "timber" Provinces situated on the coast combined. That the requirements of each Province are in future recognized, and that allotments are made in proportion to the capacity of each for making revenue, will form a chief duty of the Conservator of Forests.

Budget, 1882.

Provinces.	Amount allotted for: Timber Works. Rs.	Amount allotted for: Establishments. Rs.	Provinces.	Amount allotted for: Timber Works. Rs.	Amount allotted for: Establishments. Rs.
Eastern ...	22,230	4,740	Western ...	46,000*	—
Northern ...	11,720	3,500	Central ...	—	3,360
North-Central ...	43,390	8,440	Southern ...	1,690	2,000
North-Western ...	6,950	3,000			

* Including salaries, and Rs. 35,000 for the railway fuel supply, which can scarcely be called Government timber work, being in great measure the buying of wood off private land on behalf of the railway.

205. *Control of Forest accounts.*—I have suggested elsewhere in this report that regular monthly forest accounts might in future, with advantage, be kept in all the Provinces, the same system being followed everywhere. Accounts are at present only sent in annually. The ordinary items of revenue and expenditure appear in the usual provincial monthly accounts, but only when the annual report is prepared, by the separate items being extracted, are the results of past work with great difficulty found out. No general return is made out of the profit or loss on forest work for all the Provinces, and the results of forest work in three are, I believe, never detailed separately: they are certainly not printed. It is advisable that in such an important branch of the public service it should be possible to ascertain, without difficulty, how the work stands as regards revenue and expenditure, and the budget estimates. Hence, the forest accounts should be kept distinct, a monthly cash account being sent in from each Province to the Auditor-General.

MONTHLY RETURNS.

206. Only by having monthly accounts sent in can we secure proper audit, the Auditor-General exercise proper control over expenditure, or the Conservator inform himself of all the work that is going on.

The monthly cash accounts and the other monthly returns of trees felled, of stock, &c., the introduction of which has been suggested, will, when sent in to the Auditor-General, require constant supervision, and should form part of the office routine work of the Conservator. In doing this only the usual system of monthly accounts, which I presume are sent in by every other department, will be observed, but which, probably owing to the temporary character of forest work, has hitherto not been introduced.

207. *General statement of financial results must always accompany the annual progress report.*—Sending in separate forest accounts will not prevent the results appearing in the provincial returns, but it is scarcely necessary to say that a fair balance sheet regarding each Province, with the general progress report on forest work, should be insisted on. All chance of wasteful expenditure of forest capital not being shown in the accounts must be eliminated; everyone concerned must be able readily to compare results, so that it be no longer possible for all accounts of forest operations to be omitted from an annual report when the figures are unfavourable.

208. *Importance of giving the Conservator financial control—of enabling him and the Auditor-General to see that a regular system of accounts is kept to.*—The importance of making the Conservator fully acquainted with all that is going on, in financial as well as in other matters, will be admitted at once when the organization of the work will in a great measure rest with him, and likewise the responsibility for the financial results. He should be able to inform the Government at any time how far his estimates have come true. Although forest revenue and expenditure are included with other branches of the service in the general provincial accounts, it is necessary that "forests" in the annual budget, and also in the monthly accounts, should be kept distinct. Government and the public should at all times be in a position to judge of the results achieved by this important branch of the administration, instead of, as at present, the returns of seven Provinces, each of which appears to be drawn up on a different system, having to be consulted. So complicated are the present arrangements that I had to check the return of revenue and expenditure drawn up at the Auditor-General's Office—appearing in chapter IV.—before I could get the figures to agree with those obtained at the local provincial centres.

THE PROVINCIAL STAFF.

209. *Improvements in provincial organization.*—Returning to the Provincial Establishments, there appear to be some small modifications which would benefit the work. If a Conservator is appointed, it may at first be supposed that the Forester will become a subordinate, responsible to two superiors. This will not be the case.

210. *Maintenance of the present arrangements in principle.*—The present arrangements will be maintained in so far as the Forester will be under the orders of the Government Agent, and through him only will he receive orders. The exchange of official letters between the Conservator and the provincial forester will, of course, not take place, but semi-official correspondence will often be advisable. The Conservator will only make recommendations and suggestions, either thus or during his tours through the forests; important changes will form the subject of consultation with the Government Agent.

211. *Arrangements proposed analogous to that on coffee estates.*—If I understand correctly the system on which the Ceylon coffee estates are managed, the Conservator will occupy a position in many respects not unlike that of the visiting agent who represents the managing Colombo firm. He visits the estate, and from extensive experience gained in paying visits to estates elsewhere he is able to advise the proprietor, his Colombo representatives, and the superintendent as to the success of past treatment, and as to the requirements of the future. In the same way the Conservator will advise the Government Agent and the central Government, and whilst he makes recommendations to the Forester regarding the work, he will not issue any orders. Any distinct changes which may appear advisable, or any recommendations to the Forester should usually be submitted to the Government Agent, or to Government, the former, if necessary, issuing orders to his subordinate himself.

212. *The Forester's position at present.*—It must, however, be apparent to anyone examining the present system, that there is a certain amount of friction between the Forester and the civil authorities which does not facilitate work. Although subordinate to the Government Agent, the Forester with his staff keeps up a separate organization, has a separate office, and, except in name, is often quite independent. Communications between the Forester and the Government Agent are made by official letters, and the two offices are quite distinct. The village headmen, again, do

not regard the Forester as part of the organization of which the Government Agent is the head,* and generally on all sides there has been a tendency to form a separate department.

213. *Disadvantages connected with it.*—The present arrangements appear to combine all the disadvantages which would result from the forests being administered by a separate department, with none of its advantages. The Forester's position is ill-defined; he has none of the influence which he should have in his own Province as a Government officer, and as a subordinate of the Government Agent. Although there are many matters—such as the checking of chenas, issuing of chena permits—in which he could render invaluable assistance to the revenue authorities, his services are not systematically utilized, and no one recognizes his authority. He works as an isolated unit in a large Province, without even the support which he would receive if all the provincial foresters formed members of a separate department.

214. *Semi-detached organization bad. Involves expense and waste of labour.*—This cannot be regarded as at all desirable. It will be far better that the semi-detached organization should be once for all abolished, and that the Forester should have, in each Province, regular and well-defined duties under the Government Agent. Apart from the extra cost of office establishment, the waste of time in keeping two sets of accounts, and in writing official letters, &c., there are many other reasons which render a closer incorporation of the forest and the Government Agent's work advisable.

215. *Modifications suggested. All work to be carried on in the Government Agent's Office.*—I would therefore recommend as likely to facilitate work in the future, that the Forester should work in the Government Agent's Office, and that he should become the Assistant for forest matters; in other words, that he should be at the head of all forest work transacted in the Government Agent's Office. Instead of, as at present, the Forester having a separate office, all forest work should be conducted as forming part of the ordinary routine of the Government Agent's Office. Instead of two clerks for accounts, &c., there need be only one. The Forester will receive his orders from the Government Agent verbally or by office notes, instead of by exchanging official correspondence; he will issue all orders, except such as concern his own departmental subordinates, in the name of the Government Agent, in the same way that the Office Assistant or Assistant Government Agent issues orders at present.

216. *Forest work in future to be a regular branch of the revenue administration.*—In this way I hope that work will go on without friction. The headmen and the people generally will see that forest work is carried on under the immediate orders of the Government Agent. They will gradually learn that the Forester's orders are those of the Government Agent, and that forest work is just as much a part of their routine duties as the collection of revenue. The Forester will become an integral part of the provincial organization of which the Government Agent is the head.

217. *Absence of novelty in the proposals.*—The proposals made are to some extent but an exemplification of the original principle in making the Forester subordinate to the Government Agent. But in saying that a unification of the Government Agents' and the Foresters' Offices is desirable, I speak advisedly, having been through each of the Provinces. Nowhere, except in name, do I see any but a nominal difference between the existing arrangements and forest administration under a separate department. The Forester has none of the influence which should result from his status as a regular district official, and from the fact that in all his work he is directed by the Government Agent. Authority over the headmen would not be willingly delegated by the Government Agent to an officer of a separate department, but unless the development of the provincial system is to be cramped, and its main advantages lost, it appears that there is no other arrangement but this which is proposed—to give the Forester proper status in the provincial staff, with sufficient authority to utilize the services of the headmen in protecting the forests, in controlling the transit of timber, &c.

218. *Conduct of all forest work.*—Being at the head of the forest branch in the Government Agent's Office, the Forester will, under the Government Agent's orders, be responsible for all the forest work of the Province. The ordinary office routine will be carried on with or without reference, as the Government Agent may direct, but important matters will of course be always referred for orders. At all times the Government Agent will check the work that is being carried on, and the Forester will always be at hand when the Government Agent wishes to ask questions as to work, &c.

219. *Accounts.*—In addition to the ordinary routine of forest work, as at present, the forest accounts should in future be under the charge of the Forester. A separate cash book should be kept, and although the disbursements and receipts will still be entered in the general accounts, the Forester ought to be responsible that a correct account of the forest revenue and expenditure is kept, and not, as at present, for him to keep no cash accounts. Similarly, he should be held responsible for the realization of forest revenue.

220. *Weekly diary.*—It will be necessary to keep the Conservator fully informed of all that is going on, in order that he may communicate, if necessary, with the Government Agent. For this purpose the Forester should keep a weekly journal, to be forwarded to the Conservator, and to be returned through the Government Agent with any remarks it may be thought necessary to make. This diary will show the work that has been done during the week, with such notes and questions regarding the work as may appear necessary. At first, the references to the Conservator, and the points on which advice is required will be numerous, but as the work progresses, and the staff of efficient forest officers is organized, the Government Agent will feel greater confidence in his subordinates.

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* Known in Ceylon by the general term "Kachchéri."

221. *Result of new organization.*—If forest work is organized in this way, a great improvement over the present method of working should result. The Government Agent will retain the fullest control over forest work in his Province, and yet he will be relieved of a great deal of responsibility in the technical matters of forest management and organization. All the executive power will still remain in his hands, and even in organization he will in no way be under the orders of the Conservator. In professional matters, the opinion of the latter will necessarily carry great weight with the Government Agent, but should these officers find it impossible to come to an agreement, reference to Government can be made. But this step need only be resorted to in extreme cases, as the Conservator will always hesitate to enforce his views, unless the principles on which the work is being carried out are very wrong. There will, in reality, be no divided authority, as might be urged by persons hesitating to adopt this scheme, if the Conservator merely confines himself to offering advice, and does not interfere too much with details.

These will form the general features of the future forest administrative system. It will now be necessary to consider its application to the several Provinces.

222. *Strength of the provincial staff.*—The future strength of the provincial staff must in great measure depend on the direct present or prospective benefit derived from the work. Whilst, therefore, the immediate disbursements—in detail, or for the whole Island—on forest establishment and work will usually be more than balanced by the receipts, there is no reason to recommend the employment of an officer whose work is not likely to benefit the Colony in making immediate revenue or in carrying out works of improvement. Forest work should be distinctly remunerative, and I therefore see no reason to recommend the continuance of the present system under which officers are employed, as in the Badulla, Kandy, Mátalé and Ratnapura Districts, for the so-called checking of chena cultivation, or in making small teak plantations in which the wood produced will cost, if it grows to maturity, more than if we imported it from Burmah. In an Island like Mauritius the benefit received from forest work is an indirect one, but in Ceylon the fact of forest work not giving a fair annual return should be the sign for a radical change in the administration. The recommendations made regarding the forest staff are therefore only such as would appear, when the system is in full working, likely to be of considerable direct benefit to the Colony.

223. *Road overseers and other Government officials not to be paid for forest work.*—The employment of road supervisors or other Government officers on a small additional salary to check chenas or thefts of timber should be at once discontinued as a waste of money. Indeed, I venture to think that no duties combine less easily with road supervision than forest inspection; certainly not in Ceylon, where all the forests are a long way off the road. Yet in the Badulla District a road overseer is employed for Rs. 500 additional salary who pointed out as the best and only large forest of the district the Moneragalla block, which had been nearly all sold long before; calamander was also enumerated as one of the principal forest products. Besides meaning expenditure without any tangible benefit, these arrangements only mislead; for if an officer is allowed to assume the title of Forester, the Colonial and the Home Government naturally suppose the Badulla District and the Eastern Province are equally well provided for.

224. *Proposed Staff.—Western Province.*—In the Western Province there will be two branches of forest work which must for the present remain distinct, and for both of which there appears to be good openings, viz., *the ordinary*—comprising the protection of Government forests generally, the checking of timber transit on the rivers and canals, and the timber and fuel supply of Colombo—and *the railway fuel supply.* Forest work in the Western Province has up to the present been much neglected, although the prospects of making it remunerative are better than in any other part of the Island, and there is every reason to believe that the appointment of a competent officer would be a considerable financial and administrative success. The requirements of the railway fuel supply have been fully detailed elsewhere.

225. *Southern Province.*—It is difficult to judge of the staff required in the Southern Province until we ascertain what forests are left, and what prospects they offer of being worked with profit.

Unless good forests are found which are likely to bring in revenue, or large chena plantations are to be made, there is no necessity for appointing an officer here. The checking of chenas, as now attempted by the Forester, is useless; the teak plantations should be abandoned, and the Forester, Mr. Fraser, being an active and zealous officer, might be usefully employed elsewhere.

226. *Central Province.*—For the Central Province, where the area of forest is so small, a qualified forest officer will be necessary to protect the hill reserves, to manage the railway fuel supply, and to demarcate reserved forests in the Mátalé District. The present arrangements, by which two supervisors of roads are paid Rs. 500 a year, in addition to a forester on Rs. 2,000 in the Mátalé District, should be discontinued, and a European officer of some position, working through the Government Agent, will effect far more real good than the three men employed at present.

227. *Other Provinces.*—In each of the four remaining Provinces, where the area of forests is so large, and where considerable timber works will probably be carried out every year, a provincial forester will be required, and it is here where full opportunities will be offered for the services of competent officers. Should the North-Central Province be reduced to an Assistant Agency, the appointment of Forester ought to be retained.

The provincial divisions are at present not at all suited for economical forest operations. In the Eastern Province the Forester has to cover a long stretch of coast country, whilst the North-Central Province is cut off from the sea-board. In time I trust more compact foresters' charges may be formed, agreeing more closely with the working circles. I abstain from making any proposals now, as it would at present involve a deviation from the provincial system.

228. *Distribution of the staff less important than a careful introduction of the system.*—The provincial distribution of the staff is, however, a matter which must be adjusted in the future,

when the system developes itself. Progress can only be gradual, and it is far more important that rather than that the changes proposed should fail through being forced on every Province at once, they should be gradually introduced by means of a competent body of officers. The formation of a proper staff, considering the necessary training that the officers will have to go through, is a matter that will take some time.

THE ORGANIZATION OF A PERMANENT STAFF OF OFFICERS.

229. Work in the past has only been experimental, but we have now passed that stage. When it is evident that if work is carried on properly we may in future look to the forests as a permanent source of revenue, one of the first requisites is a proper staff of officers. To attract good men, permanent employ must be held out to them, and the same inducements of salary and of pension offered as in the other branches of the Colonial Service. Men are required who will take some pains to learn the rudiments of their profession, and who, in return for good work, may look forward to promotion. Forest work is very arduous, and the fact of the officers having to go through so much hard work and exposure is a reason for most strongly recommending that a progressive scale of salaries should be offered, and that by being placed in permanent instead of in temporary employ, they may become entitled to pension after good service. At present the foresters are all in temporary employ, and having no prospect of permanent employ or pension there are no inducements for them to study their profession or to consider it other than a temporary make-shift.

230. *Formation of a Graded Department.*—I should suggest that in future a Graded Forest Department be formed, in which a fair and progressive scale of salaries, with the usual privileges regarding leave and pension, would be offered to attract good men of some qualifications, who will make the Forest Service their profession. All the provincial foresters would be on one list, and the promotions would go by merit and by seniority.

231. *Selection of officers.*—In the selection of officers, it may be allowed me to draw attention to the points which most should be thought of. These are a knowledge of forestry and botany, and of surveying, and a good colloquial knowledge of Sinhalese and Tamil. The first two would probably not be always obtainable, but a good colloquial knowledge of the languages and of elementary surveying is essential. The forest officer must not, as is too often the case now, be entirely dependent on his English-speaking overseer or servant, but he must be able to communicate readily with the natives with whom he will have to deal if his duties are to be carried out efficiently. Indeed, the first conditions of finding permanent employ in the Forest Service ought to be a thorough knowledge of both the vernaculars.

The appointments in the superior staff will naturally be made by Government, but in the posting of the officers and in the general organization of the staff the opinion of the Conservator will no doubt be taken, when to a great extent he will be responsible for the organization of the provincial staff and the manner in which the work is carried out.

232. *Whence the officers are to be selected.—Training required.*—In concluding this subject, I would venture to point out the extreme importance of providing some technical education for the officers employed. The salaries which the Colonial Government may offer would perhaps not be sufficient to attract men from home who have gone through a long course of forestry, nor is it certain that in any case they would prove a success in so small a service. There are a large number of good men to be found in the Island, with a good colloquial knowledge of the languages, who would make the best of forest officers if they could once see how forest work on a large scale is conducted, and were given means for acquiring the rudiments of the science.

To make good practical foresters, it is not necessary that a long course of study should be gone through, but at first, until the forest system is thoroughly developed, it is most necessary that the officers selected should have opportunities for seeing how forest work, when carried out on a large scale, is brought to a successful conclusion outside the Colony.

They must have the means for acquiring elementary, theoretical, and practical knowledge, and when they have seen how the former is applied elsewhere, it will be easy to apply it to the local requirements of Ceylon.

233. *Probationary training in India.*—With this view, it appears most advisable that after serving a term of three to six months' probation in the Ceylon forests, the men selected by Government for employment, and also some of the more promising of the junior officers, should be sent to the Forest School at Dehra Doon. The means are offered for acquiring theory combined with practice, and it could no doubt be arranged with the Government of India that those portions of Indian forest work which most resemble the circumstances of Ceylon should form the subject of a short course in connection with the forest school. This arrangement would—for Ceylon—probably be more suitable than if high salaries were offered for men at home, who would come out ignorant of the languages and unaccustomed to the rough jungle life and the application of English theory and system to the requirements of the East. In India, such a man would be trained for sometime under an experienced officer. In Ceylon, he would be placed at once in a most responsible position.

234. Nothing could be of greater influence than this in the proper development of the Ceylon forest system, and I trust that it may be found feasible. The time spent in India should form part of the period of probation, and no appointments should be given to those whose attention to their work, or whose progress had not satisfied the Indian authorities. During the term of probation the candidates should be allowed a small salary and travelling expenses, but in any case this would not amount to more than Rs. 2,000 for the first year of probation. This is no large sum to pay for an officer accustomed to the country and the people, and fit to be entrusted with responsible forest work one year from his first appointment. The selection of suitable men will of course form a most important point, but by offering the same salaries as at present, with the certainty of position and a gradual rise in pay, the selection of a valuable staff will occasion no difficulty if the tests which I have mentioned are enforced.

235. *Appointment of Conservator.—Recommendation that the services of an officer more experienced than any of the local staff be secured for a limited term.*—In making the appointment of Conservator the claims of the members of the local service will of course be recognized; but in introducing the new system we must not overlook the advantage to be derived from entrusting the direction of forest work to a competent and experienced man. After the re-organization of forest work has been fairly commenced in each of the Provinces, one of the senior local officers will no doubt be found capable of directing affairs, but it is a most important question to consider, whether for the next two or three years an officer experienced in forest management and organization should not be secured. On the direction of forest work during the next two years will depend everything, and I am inclined to think that by paying a somewhat higher salary to secure a competent man for a limited term, the interests of the Colony will be secured with far greater certainty than if an officer is selected from the local staff, who, without being acquainted with systematic forest management, is expected to apply a new system to the requirements of each Province under circumstances of unusual difficulty. On these grounds, without in the least disparaging the local forest officers, who have not made forest work their profession, it appears that the employment of a professional and experienced man would be most advisable.

TRANSPORT.

236. To provide for the transport of the foresters' baggage, the system is now to allow each forester Rs. 1,200 to Rs. 1,800 a year, which is sufficient to pay eight to twelve coolies. Transport is very difficult to get; the men have to be paid Rs. 15 a month to go out into the jungle, and they carry such very small loads that very few things can be taken. The officers have in consequence to deny themselves many of those small luxuries which are necessaries when nine to ten months every year are spent in a tropical forest. They have to put up with bad food, and supplies frequently run short; the coolies, when they have been a month or so away from their homes, get discontented; and the foresters, in making a fifteen miles' march have, as often happened to me, usually to mount guard over the coolies instead of attending to forest work. Often the coolies come up so late that no hut can be built; the forester, weary and footsore, has then to sleep out, and probably gets no dinner. If he has fever next day, there is little cause for surprise. Another objection to coolies is, that during the time the forester halts, often half the month, they receive pay for doing nothing. They have to be employed by the month, so that also whilst at headquarters their pay is wasted.

The foresters have now to put up with a degree of discomfort which is most detrimental to the work, and under which the health of the strongest must break down if the work is properly done. It is hopeless, under these circumstances, to expect proper attention to be given to forest work, and this is one of the reasons why so little exploration work has been done. Camp life is no doubt pleasant enough for revenue officers who keep to the beaten track, and who have headmen to attend on them, but the life of a forester is very different when he has to sleep in cattle sheds or under the shade of trees. A back woodsman's life is quite unsuited to the Ceylon climate. A great deal of this discomfort is unnecessary, and arises from no suitable transport being provided, and no tentage or other allowance being given for the officers to travel in proper style.

237. *Necessity for the Foresters being provided with transport.*—If forest work is to be done well, it is absolutely necessary that a certain amount of comfort should be provided for the officers; they must be able to leave their camp and go to their work with the certainty of finding it and dinner ready at the next halting place in the evening. Transport sufficient to carry a small tent and one for his followers, together with furniture, a proper stock of supplies, &c., &c., which are essential for the health of Europeans in this climate, must be provided for every officer.

238. *Baggage elephants to be allowed.*—Coolies are so expensive and unsatisfactory that I should most strongly recommend a baggage elephant and two coolies being allowed to each forester. In the Northern Province carts can generally be used, but even here, and certainly everywhere else, an elephant is the only satisfactory means of transport—the only one which can be relied on, and which will place the forester in a position of independence as regards village, coolies, &c. He will then be able thoroughly to explore all the forests, and devote his entire energies to that and other work.

TENTS.

239. Each forester ought to provide himself with a light tent and one for his servants. Side walls are unnecessary; all that is required is a single fly under which he can sleep, and which will keep off the dew and rain. These will cost about Rs. 50 each.

TRAVELLING ALLOWANCES.

240. To provide himself with tents, to meet the extra expenses of travelling—servants having to be paid extra in Ceylon for going into camp—for horsekeep, the carriage of supplies, &c., a daily allowance ought to be made to all officers whilst in camp. This will of course pay for all those travelling expenses, such as rest-houses, extra coolies, &c., for which no allowance is made now. The keep of the baggage elephant and the pay of the two coolies which I have recommended should be allowed to each forester should be paid by Government. When an elephant cannot be used, an extra daily allowance will have to be made for cart or cooly hire.

If a suitable allowance is made of (say) Rs. 2 a day when a Government elephant is provided, and Rs. 4 a day without an elephant, the forester will be able to provide himself with everything that is necessary, and will be able to travel in comparative comfort. He need not then look on his forest tours as things to be got over as hurriedly as possible; he will be able to travel independently of his coolies, and the work benefit largely.

241. The adoption of these suggestions will probably mean some saving to Government. The annual transport allowance of each of the officers in the Northern, Southern, and North-Western Provinces is Rs. 500, besides coolies costing Rs. 1,200; in the Eastern Province it is Rs. 800, with coolies costing Rs. 1,440; and in the North-Central Province it is Rs. 1,750, with coolies costing Rs. 2,880 for two officers.

	Rs.
For 250 days in the year in camp, the allowance will be, at 2 rupees ...	500
Pay of 2 coolies for 10 months, at 15 rupees	300
Keep of elephant	200
Total ... Rs.	1,000

The saving is, however, but a small consideration compared with the many advantages which will result.

Unless proper transport and a daily allowance is given to compensate for the extra expense, Europeans cannot be expected to go through the discomforts of jungle life, and to resist the many temptations to which their solitary life exposes them. Measures of this sort, which are calculated to secure the comfort and contentment of the officers, soon make themselves felt in the work done.

SUBORDINATE STAFF.

242. At present the subordinate staff of overseers and kanganies is very small. In future probably it will be necessary, as forest operations extend, to enlarge this staff, and it must then be considered whether it will not be to the advantage of Government to secure, instead of a local staff for each Province, a general one for the whole Island, in which, as a reward for good work, a man might hope to rise to some superior post in the same or in another Province. When large works of improvement, such as planting, are systematically carried out, it will be most necessary to have well-trained subordinates. The dimensions of the staff in each Province will remain a matter to be decided in a great measure by the works which are carried out.

CHAPTER IX.

THE WORKING OF THE FORESTS.

243. The remarks in this chapter relate chiefly to the forests of the dry zone, to the felling of ebony, satinwood, halmilla, yavarani, palé and milla, as the principal timbers in those forests. Of the forests of the moist zone we know as yet but little, and no definite plans for future working can be made till the intention of Government with regard to the proposals in this report are made known. So many other considerations are there involved that, until a definite line of policy is laid down, it will be useless indicating, except in the roughest way, what work should be done.

DISTINCTION BETWEEN DEMARCATED RESERVED FORESTS AND OTHER WASTE LANDS.

244. According to the division of the area which is proposed, it must be remembered that our policy is to select a certain area of the best forests, and to improve their productiveness by planting, &c., and by affording special protection. It is therefore necessary to distinguish at the outset between the reserved forests and the undemarcated waste lands.

245. *The reserved forests the ultimate source of the future timber supply.*—The future supply of all timbers will mainly depend on the productiveness of the reserved forests, and they must be managed with the greatest caution. The future, rather than any immediate yield, must be looked to, and until by cultural and other operations we can solve the problem of maintaining a supply of the better timbers, and at the same time of keeping back the inferior kinds, fellings should be made very sparingly.

246. *Large quantities of timber to come from the areas unreserved.*—It is different with those areas which will not be formed into reserved forests. Over these cultivation will in time gradually spread; there is no special object in maintaining the forest in a high state of efficiency; no cultural operations will be undertaken, and the reproduction will be left to nature. The timber, as soon as it attains a marketable size, may be cut out. A large supply of timber will for some time be derived from this source, which will save the reserved forests. This will enable us to postpone working the latter, and in the meanwhile to utilize the whole of their natural resources in assisting the artificial planting, &c., which will probably be always required to maintain the reserved forests in full productiveness.

247. *Minimum girth for felling.*—No attempt has been as yet made to maintain a uniform minimum girth in selecting these trees for felling. A good deal of immature halmilla has been cut; at Padivil most of the trees marked were under four feet.

In future, for satinwood, yavarani, palé and milla the minimum girth for felling should be six feet; the same limit should be fixed for ebony. Of halmilla, no trees of less than four feet girth should be felled anywhere, whilst in the Eastern Province, and in other favourable situations, the limit should be raised to five feet and even six feet. Exceptions must of course be made to these rules. In the Northern Province the satinwood trees are often hollow-hearted at four feet girth, and rarely touch six feet; on the good soil of the Eastern Province it may be, on the other hand, desirable to allow them to attain a size larger than six feet.

THE NUMBER OF TREES TO BE FELLED ANNUALLY.

248. *An estimate of the yield of the forest impossible.*—No attempt can be made in this report to determine the annual yield of the forests; until the work of exploring and critically examining the forests has been completed, no estimate can be framed. There are no data whatever as to the approximate area covered with forest, nor has an attempt been made to ascertain by

enumeration the standing stock of timber trees of the different ages in those forests which are fairly well known.

249. *Fellings to be strictly limited until the reproduction is assured, unless large quantities of over-mature timber have to be removed.*—Unsatisfactory though it no doubt is that definite information cannot be given on this point, it is evident that any statement, with so little information before us, could only mislead, and would in any case be unreliable. Until some approximate idea of the quantity of growing timber of the different age classes has been obtained, the annual fellings should be carried out with the greatest caution. The supposed capability of the forest should be worked up to, and a broad margin should always be left for the future supply.

250. *All thoughts of increasing the revenue by increasing the outturn of timber must be given up for the present.*—There must not be the least hesitation in strictly limiting the fellings. It is possible that we may be mistaken as to the quantity of mature timber, and when it is remembered that generally the paths used by myself, the foresters and the natives in examining the forests were elephant and game tracks, which usually go direct to the nearest water-hole or to the best grazing ground, some of the best areas of forest may be still unknown, even in those parts of the country which we have visited. But the indisputable fact that no reproduction of satinwood, &c., has taken place in the forests where the traders felled, compels us for the present to forego all thoughts of enhancing the revenue by merely increasing the fellings.

251. *Number of trees felled annually by the Foresters.*—On this point there is little information available. The fact that, except in the Eastern Province, the trees felled were not marked and counted by the foresters, would render all returns unreliable. In the Batticaloa District of the Eastern Province an average of 5,700 trees* (satin, rana, halmilla, milla and palé) has been felled annually for the last eight years.

252. *Fellings only to be limited by the sales of timber at fixed depôt rates.*—Some limit must, however, be given within which future fellings can safely be carried on, and having no figures as to the area and the standing stock to work on, we must for the present endeavour merely to keep pace with the demand for timber. The only guide in restricting the outturn of the forests will be the actual requirements of the market. It is proposed that these should be supplied by cutting—of course only well-matured timber—until we ascertain conclusively that we are exceeding the annual yield, or that the outturn may be increased, owing either to the standing stock being larger than was expected, or because the natural supply is being largely supplemented by artificial plantations, &c. By the requirements of the market must not be understood the quantity of timber for which sales can be found at low rates, but the quantity saleable at rates remunerative to Government, and high enough to leave a margin of profit sufficient to pay for works of forest improvement. If the consumption becomes very large, a limit must be put to the fellings, but by that time—eighteen months or two years hence—we shall be able to form some rough idea as to what amount of timber the forests really contain.

253. *No very large sales of timber to be looked to.*—To work thus is far from satisfactory, and the greatest caution will be necessary not to fell too much. As yet we know little of what the Indian consumption of timber is. The results of past work, when the policy has been to put the maximum quantity on the market and to sell it anyhow, can be accepted as no criterion, but from information collected from various sources the demand in India does not appear to be very large, and by fixing fair depôt prices it is probable that the sales will be much smaller than they have been in the past four years.

254. *Certain revenue must come from the forests, if improved management is to be introduced.*—Contrary to rule though the adoption of so uncertain a limiting factor is, there are other reasons for recommending that for the present work should go on without any check, and that for the next twenty years fellings should be made to keep pace with a limited demand. When the systematic management of the Ceylon forests is once taken in hand, it is not likely, considering the great damage done in the past, that they will be looked on as a source of immediate revenue. On the other hand, when the finances of the Colony are weak, it is improbable any large charge will be incurred which is not equalized by the receipts. A large nett return will not be expected; but if improved management is to be introduced, the money will probably have to be provided by the forests themselves. For this reason they must for the present yield a certain quantity of timber annually. Having introduced improved administration, it will be easier later to restrict the fellings should it prove necessary. To do so now would result in the forest question being indefinitely shelved, or in its receiving a solution involving only expense and being of no permanent benefit to the Colony.

255. *The export trade must be maintained.*—Another point to be remembered is, that the export trade must be kept up; if supplies of Ceylon timber and ebony are suddenly cut off, India and China will look to other markets, and our position may be afterwards difficult to regain.

256. *Extent of present annual sales.*—In the present state of the market, when dealers in the Island and in India are said to have large stocks, it is impossible to say what the sales will amount to. The tables given in Chapter IV. show the average annual sales in 1878–1880 to have been:—

Satinwood	...	33,000 cubic feet,	at	30 cubic feet	a tree	=	1,100 trees.
Halmilla	...	25,000	„	25	„	=	1,000 „
Palé	...	19,000	„	30	„	=	633 „

The accuracy of these figures is most questionable, and they do not include the large quantities of timber put on the market by share contracts.

* According to a return supplied by the Government Agent.

257. *Estimated annual sales.*—In its normal state—that is, after the present stocks are disposed of—the market may be expected to absorb annually

2,000 satinwood trees
1,500 halmilla „
1,000 palé „

258. *Limits within which the fellings should be restricted.—Satinwood, halmilla, &c.*—To save the forests and to keep up prices, the annual fellings should not for some time exceed—

2,500 satinwood trees
2,000 halmilla „

Of palé there is such a large supply that there is no reason, except the difficulty in selling large quantities, for restricting the felling to less than 3,000 trees a year.

These figures include the so-called dead timber now being cut out from many of the forests, but they exclude the trees actually dead or dying which stand in old chena clearings: the latter must be cut out and brought to market as soon as possible. In the former case, under the name of dead timber, I find a great deal of green stuff is now worked out—trees with perhaps a dead branch and slightly past maturity, but which could stand for another twenty years without harm. Except in the case of halmilla, there is little dead timber; but even if there are a couple of dead trees to the acre, more harm is usually done in cutting them out by injuring the young growth than is compensated for by their sale. Unless, therefore, in cases like that of the halmilla in the Mandana forests, Eastern Province, where many trees have died, dead timber should only be worked out at the same time as the regular rotation fellings.

As regards yavarani and milla it may be safely said that so long as a demand exists for the timber, all *mature* trees may be cut out in those forests where the other timbers are felled.

259. *Ebony.*—As to the number of ebony trees to be felled annually, still greater caution is necessary. The market can probably absorb, at prices of Rs. 110 to Rs. 130 per ton in Colombo, about 800 tons annually. Taking an average of 2½ trees to the ton, 2,000 trees a year would have to be cut to furnish this quantity.

To cut so much would be most unwise, and for the next ten years, at least, the fellings should be limited to 1,500 trees a year, and it would be better if the fellings can be still further reduced. As permits were issued in 1872 and 1873 for 14,000 trees in the Puttalam District alone, this quantity will appear very small, but it must be remembered that the total eradication of certain species is only a question of time unless fellings are carried out with great caution.

THE LOCATION OF FELLINGS.

260. The division of the fellings amongst the different Provinces must be a matter for annual arrangement by the Conservator and the several Government Agents. To a great extent it will necessarily depend on the critical examination of the forests in the next few years. We shall find out approximately the quantity of timber that can be sold annually, and if the forests within twenty miles of the coast are found capable of affording this supply *permanently*, it will be useless to cut further inland.

That the forests within this distance will afford the required supplies of timber is not likely, and for ebony and satinwood we shall probably have to go to the most distant parts of the North-Central Province. In any case the forests must be worked as a whole, and the fellings, &c., not carried out Province by Province.

FORMATION OF WORKING CIRCLES.

261. *Decreasing profits annually, unless working circles are formed.*—In the past, work has always been begun near the sea-coast, annually going further and further back, the working expenses increasing in proportion. At first, forest operations have paid well, but gradually they show decreasing profits until, when all timber has to be carted thirty to forty miles to the coast, there will be little or no profit at all.

262. *Working circles not conterminous with the Civil Administrative divisions.*—The work must in future be arranged in working circles, within each of which everything must be arranged as a whole.

In forming these working circles it will be impossible to maintain the provincial divisions.* The latter are most irregular, and place many difficulties in the way of well-organized forest administration. The Eastern Province Forester has charge, for instance, of a narrow strip stretching for 170 miles along the coast separating the Central and the North-Central Provinces from the sea. The forester of the latter has, in order to reach his two markets—Puttalam and Trincomalee—to go nearly thirty miles through the Eastern or North-Western Province, the two places being separated by the entire breadth of the Island. It is impossible that he can control the forest work and at the same time sell his timber.

263. *Four working circles to be formed.*—The working circles must be arranged according to the lines of export and the different markets, and should consist of—

(1) *The Northern Circle*, comprising the Northern Province. *Ports:*—Mannár, Jaffna, and others in the Northern Province.

(2) *The Eastern Circle*, comprising the Eastern Province, the eastern half of the North-Central Province, and the eastern parts of the Central Province. *Ports:*—Trincomalee, Batticaloa, and other minor shipping places.

* This will not, however, include the forester's charges, which will remain provincial.

(3) *The Puttalam Circle*, comprising the Puttalam and Kurunégala Districts, the western half of the North-Central Province, and that part of the Northern Province south of Mannár. *Port.*—Puttalam.

(4) *The Colombo-Galle Circle*, comprising the Western and Southern Provinces. *Ports.*—Colombo, and those along the western coast.

It will be better to retain four divisions, instead of making two large circles, on account of the difference in the character of the forests, and for facilities in working.

264. *Northern and Eastern circles to supply the Indian market.*—The northern and Eastern working circles will be managed with a view to supplying the markets of the Coromandel Coast. From the principal ports timber can be sent as cheaply to India as to Colombo and Galle, and only ebony and cabinet woods, such as flowered-satinwood and logs of unusual size suitable for furniture, will ordinarily be shipped to the latter.

265. *Timber supply of the western coast from the Puttalam and Colombo circles.*—The Puttalam and Colombo-Galle circles will supply the principal local consumption at Colombo, Kandy, &c. Except of palé and lunimidella there will be few shipments to India, and that market need not be considered in arranging the operations.

266. *Revenue and expenditure to be equalized in each working circle year by year.*—In each working circle the annual revenue must be equalized. In the Eastern circle, for instance, after ascertaining what area we must cover to keep up the annual supply of timber, those forests contiguous to the coast must not only be worked, but also simultaneously some of those more distant, and any great fluctuations of revenue and expenditure avoided. In all the forests fellings will go on in regular rotation. Although in practice it is not always possible to have the mean distance for transporting timber and the cost of working the same, year after year, these objects must be aimed at. When the organization is complete, and working plans can be drawn up, each of the latter will comprise one working circle, in which all operations will be conducted on a general plan arranged for a series of years.

THE NORTHERN CIRCLE.

267. *Timber to be cut.*—Nothing but palé and yavarani should be felled here for many years. A few over-mature or hollow satinwood and a few milla might be cut whilst the two former are being worked out. All the forests have been overworked, and the felling of all trees but palé should be restricted for some time.

268. *Sales of firewood and inferior woods.*—It is from the coast forests of this circle that there is the best chance of opening up a trade in inferior woods and in firewood. A great deal may be done in this way—not solely with a view to revenue, but combined with cultural operations. In the latter case, considerations of revenue may be entirely waived. Every facility should be offered for obtaining cheap supplies of small timber from the coast forests, and as at certain times of the year the freights to India from Jaffna are quite nominal, the prospects of opening up a considerable trade are not remote, if we can ensure the wood being retailed at cheap rates on the mainland.

THE EASTERN CIRCLE.

269. *Timber to be cut.—The chief supply for the Indian market.*—From the Eastern circle most of the timber for the Indian market will come. Satinwood will be cut in the Batticaloa District and in the North-Central Province; halmilla will chiefly come from the southern end of the Batticaloa District,—elsewhere there is little mature wood left, and the artificial reproduction of this tree will require very early attention. Yavarani and milla should be cut from those forests in which satinwood and halmilla are felled. Tamankaduwa will form a cheap source for supplying ourselves with the former. Palé will be cut only from the coast forests, and until the consumption largely increases the supply in the forests 15 to 20 miles from the sea coast will be ample for our requirements; none should be cut in the North-Central Province.

270. *Inferior timber and firewood.*—Here, too, sales of firewood and inferior timber might be made with advantage. From the land sold on the coast between Batticaloa and Valachena large quantities of churapunné poles have been sold sufficient to pay for the land. There are other woods, such as mango, common in the coast forests, from which a good deal of money is made now by natives.* Round posts of churapunné, 15 feet long and of 12 inches in girth, fetch on the seabeach 25 cents each, and as fifty of these and five mango trees suitable for making canoes, for beams, &c., is no extraordinary yield to the acre, it is evident considerable revenue may be looked for. Captain Walker has already made a commencement by having mango canoes made, but here, too, as in the western coast, Government is undersold by the purchasers of forest land. I trust that in future, before selling land, the Forester will be allowed either to cut out all the wood himself, or to purchase it at a fixed price from the people clearing

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* A detail, supplied by Captain Walker, of the timber cleared from a block of twenty-one acres near Batticaloa may be of interest. The land was bought by a forest contractor for Rs. 10 an acre, plus Rs. 2·50 survey fees:—

	Rs.	cts.
700 churapunné sticks at 25 cents each ...	175	0
24 small canoes at Rs. 2·50 each, less Rs. 1·25 cost of conversion ...	30	0
67 beams of sorts, sold at Rs. 4 each, less Rs. 1 cost of conversion ...	201	0
Total...Rs.	406	0

The sale of the timber, therefore, brought in over Rs. 19 an acre, against a cost of Rs. 12·50.

the land. Another plan would be to sell the standing timber by auction at the same time as the land.

THE PUTTALAM CIRCLE.

271. *Timber to be felled.*—In this circle, which comprises the whole of the North-Western Province and the very large forests of the North-Central Province west of Anurádhapura and the North road, satinwood, halmilla, yavarani, milla and palé will be felled. Of all, except halmilla, there is probably a supply ample for the Colombo market. Some halmilla may still have to be brought from the Eastern Province, but this should not continue long, as the river-lands in the North-Western Province are unequalled for halmilla.

EBONY.

272. *Uncertainty as to the supply.*—Until all the forests are carefully examined, it is most difficult to say where ebony should be felled. In the Northern and Eastern Provinces all the sound trees have been worked out, and it is only in the unexplored forests of the North-Central and North-Western Provinces, that any large supply may be looked for. Part of this will come out on the eastern coast, part on the western,—and all sent to Colombo for sale.

273. *Injured and over-matured trees to be cut.*—Attention must be drawn to the importance of working out the trees tapped and damaged by the traders. In some forests of the Eastern Province and elsewhere one-third or more of the trees left are injured, and should be removed at an early date. Ebony of this sort only should be cut in the Northern Province; small quantities may also be looked for from the extreme north end of the Mátalé District.

THE COLOMBO-GALLE CIRCLE.

274. It is in the forests of the moist zone comprised in the Colombo-Galle circle that the best opportunity exists for the future development of the forest resources. If the proposals made elsewhere are accepted, we have here a market not limited by the exorbitant demands of the timber dealers and the difficulties of an export trade, but where, by placing ourselves in direct relations with the consumer, increased consumption must follow a reduction in price. Elsewhere the working expenses will always be heavy, and both the supply and the demand limited. Here the reproduction is good, and the forests may be always worked up to their full capability without any misgiving as to their future supply, whilst cheap water-carriage can be had to the coast.

275. *Uncertainty as to quantity of timber consumed in Colombo.*—As to the quantity of timber now consumed in Colombo and along the western coast, there are no figures to show. Everywhere the demand appears to be considerable, whilst the prices, especially between Galle and Kalutara, are very high.

The first step is to ascertain what forests are left, and then gradually, by demarcating and reserving them and protecting the other Crown lands, to commence operations. By checking the transit of timber on the rivers, figures will soon be collected as to the quantity of timber sold annually.

276. *Forests of the Central Province.*—The forests left in the Central Province are either at high elevations, or, as in the Mátalé and Badulla Districts, they are so remote that there is little chance of their being workable—except for ebony—at a profit. In certain parts of the coffee districts there will be sales of firewood for general purposes and for tea making, but no large demand will spring up for some time either for firewood or timber. In the case of the Mátalé timber, it will be exported towards the western coast; the forests on the borders of the Badulla District will be taken towards Arrogam Bay, and they might advantageously be placed under the Eastern Province Forester. Those in the northern parts of the Mátalé District should likewise be worked through the North-Central Province Forester. The duties of the Central Province officer will not permit of his visiting constantly these remote parts, and although the organization and protection of the forests will naturally rest with the provincial authorities, economy and facility of control in transit will be secured by placing the felling operations under the foresters of the adjoining Provinces.

THE FELLING OPERATIONS.

277. *All timber to be worked out by Government Agency.*—After what has been said it is scarcely necessary to point out that licenses or permits should never in future be issued; also that the ruinous share system must never again be made use of in any form, except for working out the branches (top and lop) and dead or dying trees in chenas. Even then the work should be subject to precisely the same checks in the forest, and in transit, as the better timber.

All timber should in future be worked out by Government agency, contractors being usually employed to carry out the different operations on payment.

278. *All but authorized persons to be excluded from the forests.*—At the outset it is necessary to point out that the forest must be regarded as a valuable property, in which no one should be allowed to go without due authorization and for a definite purpose. If timber fellers and contractors are allowed to wander at large through the forest, it appears self-evident that damage and theft must occur. To prevent everyone going into the forests, even those which are reserved, would be difficult in the case of the villagers, but the foresters must no longer permit timber fellers and carters to roam unchecked over an entire Province, placing confidence in the honesty of the same men who, under the old license system, admittedly stole a great deal of timber.

279. *Selection of trees for felling, &c., to be made by the Forester.*—Neither the contractor nor any of the men he employs must be allowed to enter the forest without proper authorization.

The selection of trees for felling should be made by the forester himself, who will stamp and number them, taking girth measurement. Having selected them, the timber fellers must be given a felling permit. After felling, before the trees are cut up, they should be again visited by the forester, and each tree marked off into logs. At the same time the length and girth of the logs must be measured, and each log must be stamped and numbered. The arrivals in depôt must agree exactly with these figures.

280. *Timber to be cut into dimensions likley to fetch high prices.*—The trees should be cut into logs with a cross-cut saw. Attention should be paid, as far as is consistent with due economy of material, to the working out of long logs, and to cutting lengths which suit the market.

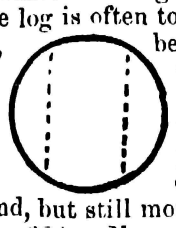
It must not be left to the timber fellers to cut trees into whatever lengths they like, wasting material to meet the convenience of the carters.

Many a fine piece of satinwood and palé is now left behind or thrown aside by the carter when he finds his load heavy. Ebony, instead of being cut into lengths which can be shipped—12 feet is the greatest length accepted by the China steamers at Colombo—is brought out in various lengths up to 20 feet.

281. *Branch wood and small timber.*—In felling trees now it is the custom to cut only one log from each tree, and the best of the timber is wasted. In future, great attention must be paid to working out the branch wood, bringing to market as much timber as possible from each tree. Much of the branch wood suitable for door-posts, &c., sells quite as well as the large logs, and at the same time costs less to work out. In bringing out common jungle sticks suitable for native house-posts, mamoty handles, and in things of this sort, much revenue may be made with small outlay.

282. *Loss in squaring timber.*—The practice has been up to the present to square all large timber. In some satin and palé logs which I have measured, the loss by squaring has been over 30 per cent.; it is never under 25 per cent. The loss increases with the size of the tree, and in the case of one satinwood log in the Eastern Province, 12 feet long, the sides of which measured 2 feet 4 inches, the loss in squaring was 50 per cent., the cubic contents being 65 cubic feet against 125 cubic feet unsquared. Satinwood planks two feet wide are very rare, and sell in Colombo for Rs. 2 a cubic foot, so that a loss of this sort is serious.

283. *Squaring to be discontinued.—Two slabs to be cut off with the saw, if logs are too heavy.*—Squaring has been continued to accommodate the carters, but when, as is the case of all the Ceylon timbers growing in the dry zone, the quantity of sap-wood is quite nominal, there is no reason why this waste should go on. In the case of very large logs, such as that which I have mentioned, the entire log is often too heavy for even two carts to carry. It should then be sawn into three pieces, thus,



before removal. But in the majority of cases the logs are not really too heavy to remove, although the carting sub-contractors, being paid by the piece, prefer light logs to heavy ones. Purchasers also prefer squared logs to round ones, but the fact that in the North-Western Province the largest logs are never squared proves that there is no real necessity for such waste. The system should be at once stopped. In any case it would be absurd to leave 30 per cent. of all timber behind, but still more so when our supply is so uncertain.

284. *Necessity for studying the proper season for felling.—The seasoning of woods, &c.*—Attention must be paid to the proper season for felling all timbers. Owing to the want of attention to this point the wholesale condemnation of our many Ceylon timbers, for railway and other purposes is probably due. The present plan of cutting off the sap-wood immediately ebony trees are felled results in nearly all the Ceylon ebony being disfigured by splits down the centre. Cleaning the stems whole, and allowing the wood to season in the forest before cutting into logs, would probably be an improvement.

To the seasoning of palé, especially, great attention must be paid; the fact of the wood splitting after it is cut up alone prevents it being used for sleepers, &c.

285. *The tapping of ebony.*—This might be entirely discontinued. Experienced native timber cutters can select all the best trees at once without tapping. There is generally some wound or a decayed branch-stump through which the heart-wood may be seen. In future, the selection of the trees for felling will depend on the state of the tree and its surroundings as much as on the existence of heart-wood, and tapping will then be less thought of. If it be really necessary to tap the trees, the practice of cutting a large hole with the axe must give way to the use of a small auger or gouge.

286. *The removal of timber.—Permits for carts, rafts, &c.*—When the logs are ready for removal, a permit must be issued to cover each of the carts or rafts. It will not do to give a permit to remove 100 logs, the work being done in several trips; but each trip must be covered by its permit, so that in meeting a cart or a raft we shall know at once about its contents.

The permit will be given up on delivery of the timber in the depôt, where the marks and measurements must be checked to see that no logs are left behind and others substituted.

287. *The cutting of cart tracks to each tree a bad practice.*—The present practice in removing the timber out of the forest is for the contractors to employ veddahs or villagers to cut the jungle off a cart track seven feet broad, leading up to each tree, and for a circle of about fifteen feet diameter round the stem. In clearing away the jungle all the seedlings of the better trees are also cut. The number of the latter at all times is small, and as they either coppice badly or not at all they are soon overgrown by the soft woods, most of which coppice well. For each tree probably an average length of track of a hundred yards has to be cut, and when only five to ten trees stand to the acre, and those parts especially where seedlings are most likely to grow are cleared, the bad reproduction where past fellings have gone on is partly explained. An additional reason, also, is that any seedlings springing up on the cart tracks after the fellings are now constantly disturbed by a return of the felling parties. When, in the future, the forests are worked in regular rotation this difficulty will disappear, but clearing all undergrowth, both good and bad, off a large area in

order to cart away one log is wrong in principle and incompatible with proper natural reproduction under the most favourable conditions. It is not said that everywhere in cutting a cart track satinwood and other seedlings are cut,—they do not exist always; but no means are taken to protect them, nor would it be possible to do so when they are so small and are scattered so irregularly through the forest.

288. *Cutting a track to each tree to be stopped.*—Cutting a cart track to each tree should be discontinued, and the space cleared round the stumps should be restricted, the better woods being specially protected. When squaring is discontinued less harm will be done in disturbingthe seedlings.

289. *Division of the forest into parallel strips by cart tracks.*—In future the adoption of the following system is recommended. Having decided where we are to work, parallel foot-paths should be cleared at intervals of 400 yards. The forest will thus be divided into strips 400 yards wide, and the selection of trees for felling should take place systematically strip by strip. After the trees are felled and logged the paths should be widened to seven feet, and the logs dragged out to them by elephants. Once on the paths they will be carted away. The objection to this system is the difficulty of finding trees or logs, unless there is a path leading up to them, but having the parallel roads as a guide, it will be easy to mark down the approximate position of each log, especially when felling and carting are carried out almost simultaneously. Dividing the forest into parallel strips will ensure the whole of the ground being gone over. At present, trees are selected by the natives here and there, and having nothing to steer by, large portions of the forests are often left untouched. Once off the paths in the dense undergrowth, a European, in selecting trees, &c., loses his way at once, and unless at the outset a system of parallel paths is introduced it will be impossible to work the entire area satisfactorily.

The cost of this innovation will be quite nominal, and will soon repay itself. Experience of elephants in the Ceylon forests has up to the present been unfortunate, but probably because they were put to work quite unsuited to them. In the construction of irrigation works in the Eastern Province, and in other public works, they have been of the greatest assistance. When put to light work, such as the dragging of logs for short distances in the forest, there is no reason why they should not do equally well. Full-grown elephants must be used, placed under proper management, and regularly trained to the work. It will be far better to buy a well-trained animal than to attempt work with a freshly-caught one. Some of those now employed on the railway extension works may possibly be available soon.

290. *Most of the timber to be carted to the sea-coast.*—Most of the timber will be taken by cart to the sea-coast. River transport should be used whenever it is possible, and with this view the forests should be worked simultaneously for satinwood and halmilla, the latter helping to float the former. It is also most important that the sale of the inferior soft woods should be developed, so that river transport may be available for the hard woods to a much greater extent than at present.

291. *Opening out of the Mahávili-ganga for floating.*—The only river of the dry zone on which floating can be systematically carried on is the Mahávili-ganga. Above Dastota there is said to be an obstruction which stops rafts coming down from the Central Province. The course of the river has never yet been surveyed or examined. It would form so valuable a means of utilizing the forests of the Mátalé District, of the Pallé Paláta and Bintenna, that I trust early measures may be taken to ascertain what the obstruction consists of, and the approximate cost of its removal.

In the moist zone, water transport will be used almost exclusively.

292. *Payment for work.*—Payment for carting timber should be made on a sliding scale, higher payments being offered for long and heavy logs. At present, one contractor undertakes all the timber operations. For felling, logging, squaring, &c., he employs sub-contractors. After going into the figures with Captain Walker, we came to the conclusion that it would be more economical to make separate contracts for the felling, logging, carting, shipping, &c. The prices now paid for carting are high, the contractor often employing sub-contractors. It would be well that separate contracts for each of the operations be made, as there will then be less chance of theft, and better work will be done when the timber-cutters work directly for us instead of through a contractor who underpays them.

SALES OF FOREST PRODUCE.

293. *Difficulties connected with the sale of timber.*—Having brought our timber to the sea-coast, the difficulties connected with its sale are not small. The existing system has been very fully described, and although nothing could be worse, it is difficult to see how, in the case of our principal market—India—we can, without shipments to the Indian ports on Government account, hope to correct its defects entirely.

294. *Government must take the place of the timber dealer and retail timber, as in India.*—Whether in the case of consumption in the Island or in the Indian trade, the object is to place ourselves in direct relations with the consumer, and to abolish the middlemen, who rob the consumer, and who, if thefts of timber go on, afford the only means of making away with the stolen property. The only way to reach the consumer, to give him the full benefit in price, and to secure a fair price for our timber, is to go into the market ourselves, and to open, as in India, *timber depôts,* where the Government timber is retailed in log and scantling at prices fixed according to quality.

295. *Auction sales to be replaced by the depôt sales.*—Auction sales of ordinary timber lead, as we have seen, to endless abuses. They cause great waste of time, the reserve price being seldom bid up to. If sales are made—perhaps by the reserve being reduced—it will generally be found that most of the lots are sold to one man, who has brought dummies to give the auction a more real appearance.

It is far better to fix a price at which the timber can be bought in a regular timber yard or depôt, and then to sell it to the first comer. Government is not so dependent on timber revenue that it cannot hold out for fair working profit. The price must be regulated by the demand for timber and by the cost of working. If people decline to buy, and try to force down prices, fellings have only to be stopped, and we can then wait till a genuine demand springs up, and devote ourselves to the more urgent work of forest organization. I should therefore propose the following arrangement for the sales of the common timber. The sale of cabinet woods will be considered separately.

THE NORTHERN AND EASTERN CIRCLES.

296. *Auction sales occasionally to be held.*—In the case of the Northern and Eastern Circles, auction sales should only be occasionally held at the principal ports of Jaffna, Batticaloa, and Trincomalee, when a special demand for timber exists. They should only be held at distant intervals of not less than three months,—long notice in advance should be given to admit of orders being procured from India,—and some reasonable assurance should be given that no other auction sales will be held for a certain time. Working with only small capital, and taking some six months at least to realize on their purchases, the chetties must be given some information as to the future supplies before they can be expected to bid freely.

Usually only inferior timber, branch wood, &c., should be sold by auction.

297. *Timber depôts to be opened at Jaffna, Batticaloa, and Trincomalee.*—At each of these ports a timber depôt should be open, for the sale of satinwood, halmilla, yavarani, milla, palé, or such of them as are brought in from the forests. The principal sales will take place in these depôts, which will always be open. They should be managed like the Colombo timber depôt.

298. *Their management.*—To the Jaffna depôt will come all the Northern Province timber, and it will, naturally, be managed by the forester.

The Batticaloa depôt, receiving the timber from that district, will also be under the provincial forester.

To Trincomalee, in addition to timber from the Trincomalee District, will come that from the eastern half of the North-Central Province. The maintenance of two depôts at Trincomalee is a useless expense, and as it is advisable for many reasons that all sales of timber at each port should be in the hands of one officer, the existing depôts should be amalgamated. The sales would then be under the Eastern Province Forester, who has to manage thirty miles of forest separating the North-Central Province from Trincomalee.

299. *Transit depôts.*—Before leaving the North-Central Province, the timber should be brought to convenient transit depôts, and after being passed there, consigned with a proper pass to Trincomalee; or in the transit depôts it might be taken over by the Eastern Province Forester. This may recommend itself, for as far as possible all transit arrangements in one Province should be entirely under the control of the responsible officials.

300. *Timber from the western half of the North-Central Province to be sold by the North-Western Province Forester.*—Similar arrangements should be adopted with regard to the North-Central Province timber sold on the western coast. It will all be sent to Puttalam and sold there, or sent to Colombo, as the North-Western Province officer—directed by the Conservator—may think advisable. In the past, the objection to an arrangement of this sort was that at an auction a forester would naturally take greater pains to secure high prices for his own timber. Under the depôt system no difficulty of this sort can arise. As soon as a tree is felled we shall be able to tell at once what its depôt sale rate will be, and in the depôt a purchaser will obviously look to satisfying his own wants only. The sales, moreover, will form part of the regular duty of each of the officers, and, supervised by the Conservator, there is no fear of injustice being done or of carelessness remaining unnoticed.

301. *A re-arrangement of the provincial divisions would facilitate forest work.*—The arrangement proposed is the only one compatible with maintaining the provincial system. I trust, however, that some day it may be possible, by a re-arrangement of the provincial divisions, to combine the advantages of provincial forest administration with well-arranged foresters' charges. A glance at the map will show how unsuited all the present administrative divisions are to the exercise of efficient control from the headquarters of the Province.

SALES IN THE PUTTALAM AND COLOMBO-GALLE CIRCLES.

302. *All timber to be sold in the Colombo depôt.*—Here there should be no auction sales except of inferior, unsaleable timber—the refuse of the depôt. The local sales in the Puttalam circle are unimportant. Sales to Colombo merchants should be discouraged, all the timber being sent to Colombo and Galle on Government account. In the first instance a Government timber depôt should be opened at Colombo for the sale of all the timber now cut from the Puttalam circle, for that to be brought from the forests in the moist zone, and for such timber as it is necessary to bring from the eastern circle.

303. *Management of the Colombo Timber Depôt.*—The timber depôt should be situated in some central place. As a convenient spot, the land east of the Surveyor-General's Office has been mentioned by His Excellency the Governor, and having communication with the canal and river no better site could be found. The depôt should be managed thus. On being brought into depôt (say from Puttalam) the timber will be accompanied by a pass from the forester there specifying the quality and quantity of timber, the marks, &c. The measurements will then be verified and entered in a book kept for the timber from that circle, and a depôt number added. Between such hours that suit the public the depôt should be open for everyone to go in and buy any of the logs lying there at the rate shown in the depôt books. Before being sent from Puttalam the timber will be rated at 1st, 2nd, or 3rd class, according to length of log, quality of timber, &c.,

and the same classification will be adhered to in Colombo, except for some special reason. The classes and the rates at which timber is sold will be fixed by Government, and after timber has once been entered in the depôt books it must be sold at the full price fixed, any reduction being made the subject of special reference. Before being sold the Government marks will be cancelled and a special sale mark attached.

Timber brought down by river from Ratnapura, Kalutara, &c., will be sold in the same way. Most of this wood will have to be sawn into scantling. For this the erection of a saw bench may be advisable later.

304. *Existing depôt at Grandpass to be retained for the sale of firewood.*—There is now a small depôt at Grandpass, under the Fuel Superintendent, Western Province, where firewood is kept. This might without harm be retained for that purpose, but no sales of timber in Colombo should take place except through the Fort depôt. Subsequently it may be advisable to have a properly-managed branch depôt at Grandpass for the sale of mango and lunumidella to boatmen, &c., and for firewood; but for some years the market will be well supplied with these woods from private land.

305. *Advantages of a Colombo timber depôt in facilitating protection.*—By establishing a Colombo sale depôt, the public no less than Government interests will be benefited. No more effectual means of protecting the forests and of preventing theft can exist than carefully controlling all sales. By organizing all the timber depôts on one system, and by arranging retail prices at the out-ports so that wood cannot be bought there and resold in Colombo, the public will learn to look entirely to the Government depôts for its timber supply. When an intelligible system of marking both Government and private timber is introduced it will be known at once that an unmarked log, or that one for which a price lower than the Government rate is asked, must have been stolen. Having the monopoly, we shall be able to watch the market. Large thefts of timber must cease as soon as all timber arriving in Colombo is checked.

The monopoly can at first only be asserted in the case of the hard woods of the dry zone forests, but gradually the Government will regain an influential position in the soft wood trade and control prices to a great extent.

306. *Reduction of prices.*—The public throughout the Island will also largely benefit by being able to purchase good timber at prices lower than those now paid, and in usually being able to calculate on a supply at a fixed price. It will be open to everyone to select timber from the depôt, but in other respects the latter must be managed as a private timber-yard. It will be a public convenience; and although the general wishes of the public will be met as far as possible, individual interests must not be considered because the undertaking is a Government and not a private one.

307. *Higher prices will also be realized.*—For our timber we shall get prices much higher than the present ones, whilst the expense of bringing it to Colombo will not be much greater than the present cost of collection at the provincial depôts.

At present, timber cut in Arrogam Bay is collected at Batticaloa and thence shipped by private persons to Colombo. Shipping from Arrogam Bay to Batticaloa costs Rs. 3 a log of 25 cubic feet, and from Batticaloa to Colombo Rs. 5 or Rs. 6 a log. In future, timber will be taken direct from the forest to Colombo, and as soon as Government shipments of timber are carried out on a large scale the saving will be even greater.

308. *By whom the Colombo depôt is to be managed.—Management by the forest staff essential.*—The management of the Colombo depôt is an important point. On this will so largely depend the financial success of all forest work in the Island, that it is essential to place it under one of the officers of the forest staff, supervised by the Conservator. The duties will not consist solely of selling timber, but also in checking the entire imports and the sales in Colombo, requiring an intimate knowledge of the timber trade, of forest operations, &c. The depôt must be managed by persons who have a direct interest in the success of forest work. Under these circumstances, it is scarcely necessary to say that to place the depôt under the Colonial Storekeeper, who would have no direct interest in the sales, would be a most injudicious step. The public would be exposed to great inconvenience by having to attend within office hours, and instead of meeting with every facility for purchasing timber, it would have to go through many formalities; the timber would probably be badly sorted, stored, &c., and in a short time we should see the entire system condemned.

309. *The railway fuel supply officer to be entrusted with the work.*—To entertain an officer specially for the depôt would be unnecessary, and it appears that it should be placed in charge of the officer conducting the railway fuel operations. The other alternative is to place the depôt under the Forester of the Western Province, but as he should be employed exclusively for some years in the selection of reserves, &c., the necessity of his constant presence in Colombo would delay that most important work. The fuel supply officer will always be within easy reach of Colombo, and if, as should also be arranged, he carries out in addition to the depôt work the control of the timber trade centring in Colombo, the Western Province Forester will be able to devote all his time to proper forest work.

310. *Appointment of a well-qualified officer necessary.*—For this important work at Colombo, which will be a most responsible one, I need scarcely point out that the appointment of a well qualified officer is essential. The introduction of the new system, except by a thoroughly competent man, should not be attempted. A man is required who will think for himself in developing the details of the system and in overcoming the numberless obstacles which he will at first encounter. He must, moreover, take an intelligent interest in his work and work hard at it. Only on the assumption that it will be possible to secure officers of this stamp is the introduction of so many changes recommended.

At the depôt, the timber should be placed in charge of a responsible native subordinate, who must live on the premises and always be present.

311. *Depôt work to be specially supervised by the Conservator.*—The railway fuel work will be carried on under the Government Agent, Colombo, and the depôt work might also be carried on in that office or in that of the Conservator. The depôt should, in any case, be under the special supervision of the Conservator, for the interest of several Provinces will have to be considered, and in sending timber to Colombo, in adjusting accounts, &c., control over the operations in several Provinces will be exercised.

312. *Receipts and expenses from Colombo depôt.*—The receipts in the Colombo depôt should be credited to the Provinces from which the timber comes, the money being paid into the Treasury and credited thence by book transfer. The depôt expenditure should, like the Conservator's salary, &c., be debited to the general forest accounts, the salary of the officer in charge being paid fromthe same source as at present. The cost of bringing timber to Colombo will be charged to the Province where it was felled.

313. *Other depôts to be opened later.*—When the Colombo depôt is in full working, smaller ones might be opened in Kalutara and Galle; but too much should not be attempted at once. The system will work well if carefully introduced. The interests of the timber dealers are powerful, and the existing system cannot suddenly be revolutionized.

314. *Provincial depôts to be similarly managed.*—The different provincial depôts will be managed in the same way by the foresters. The sales there will generally be wholesale, and by making concessions in price, &c., every encouragement should be given to the Indian trade. Private shipments to Colombo should be discouraged.

315. *Depôt prices.*—The prices to be paid and the quality classes for timber in the different depôts must be a matter for future adjustment. The prices in Colombo should be generally 25 to 40 per cent. higher than in the Provinces. All large timber should be sold by the cubic foot. Poles, posts and other small timber will of course be sold by the piece.

The following prices are suggested for adoption. They leave a fair margin on the cost of working and of shipment. When large sales are made to Indian shippers the price of first-class timber might be reduced 20 per cent.

Proposed Scale of Depôt price for timber in log (per cubic foot).

	Northern Circle.			Eastern Circle.			Puttalam Circle.			Colombo-Galle Circle.		
CLASS—	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.	Rs. cts.
Ebony (All to be sent to Colombo)	—	—	—	—	—	—	—	—	—	130 0	110 0	90 0
Satinwood ...	1 25	1 0	0 87½	1 25	1 0	0 87½	1 25	1 0	0 87½	1 50	1 25	1 0
Halmilla ...	1 25	1 5	0 90	1 25	1 5	0 90	1 25	1 5	0 90	1 50	1 25	1 0
Rana (two classes only)	1 0	0 75	—	1 0	0 75	—	1 0	0 75	—	1 25	0 90	—
Milla (do.) ...	1 0	0 80	—	1 0	0 80	—	1 0	0 80	—	1 25	1 0	—
Lunumidella (do.) ...	1 0	0 75	—	1 0	0 75	—	1 0	0 75	—	1 25	0 90	—
Palé ...	1 0	0 80	0 65	1 0	0 80	0 65	1 0	0 80	0 65	1 10	0 90	0 75
Hora ...	—	—	—	—	—	—	—	—	—	1 0	0 90	—
Hal ...	—	—	—	—	—	—	—	—	—			
Mango ...	—	—	—	0 90	0 80	—	—	—	—			
Other sorts ...	0 80	0 70	0 60	0 80	0 70	0 60	0 80	0 70	0 60	0 90	0 80	—

Logs of lengths up to 12 feet in length. For 12 feet up to 15 feet, 10 per cent.; over 15 feet up to 18 feet 25 per cent. extra. Logs over 18 feet, 10 cents per cubic foot added for every additional foot in length.

Logs of specially large girth, 25 to 50 per cent. added; specially fine logs of furniture wood to be sold by auction at Colombo.

For quantities over 500 cubic feet a discount of 10 per cent. allowed.

Ebony to be sold only at quarterly auction sales in Colombo. The figures given are those which should be fixed as the reserve prices at auction.

TIMBER FOR THE PUBLIC WORKS DEPARTMENT.

316. *Keeping of special depôt stock impracticable.*—At present the foresters have orders to keep a large stock of timber in depôt for the use of the Public Works Department. If forest work in the future is to be a financial success, it is manifestly unfair that it should be burdened with the expense of the storing and deterioration of a large stock of timber which the Public Works Department may never take. Since November, 1880, the Forester of the Eastern Province ought to keep always at Trincomalee a stock of 150 satinwood and 150 palé logs; yet in two years no palé and only a few satinwood logs have been bought.

If the Public Works Department cannot three or four months in advance foresee what timber it will require, and lay in the necessary stock, it is surely no duty of the officers managing the Crown forests to bear the expense of keeping up a large stock. It is also unfair on the public paying prices the same or higher than the Public Works Department, that it should only have the rejections of the latter.

317. *Public Works Department in future to select timber from the sale depôts, paying the depôt rates.*—In future, it is proposed that the Public Works Department should avail itself of the timber depôts like the public, and that the officers should select such timber as they require at the depôt prices. To secure, however, the best timber for the Public Service, all might for a week or so after arrival in depôt be reserved for the Public Works Department, due notice having previously been given to the officers concerned. It is understood that this arrangement will meet the views of the Public Works Department.

318. *All timber should in future be supplied by the Foresters.*—It may not be out of place here to suggest that, if possible, all timber required by the Public Works Department should be

purchased from the foresters if they can supply it. A good deal of timber is now bought in Colombo, &c., either through the Colonial Store—where in future there will be no object in keeping stocks of Ceylon timber—or in the open market. In the latter case high prices have to be paid, and the wrong timber often supplied. In constructing a jetty recently (April, 1882) at Colombo, 50 to 60 palé piles thirty feet long were wanted. Owing to there being no arrangements for procuring the timber on indent from the foresters, immature ná wood had to be taken, for which Rs. 3 a cubic foot was paid; amongst the ná some liangú *(Homalium zeylanicum)*—an untried timber, probably quite unsuited to the work—was put by the contractor. The North-Western Province Forester could have supplied palé piles at Rs. 1·50 a cubic foot, and have saved the Public Works Department some Rs. 1,500, in addition to giving better and genuine timber.

319. *Annual consumption of the Public Works Department.*—It may be useful here to note the average annual consumption of the Public Works Department in the three years, 1879–1881, according to a return supplied by the Director of Public Works.

	Cub. ft.		Cub. ft.
Satinwood	... 9,400	Hora	... 14,000
Milla	... 9,700	Doon and keena	... 16,000
Halmilla	... 2,300	Miscellaneous soft woods...	7,300
Palé	... 12,000		
Rana	... 1,600	Total	... 81,300
Jak	... 3,400		
Hal	... 5,600		

Excluding reepers and shingles and some planking bought by the superficial foot.

320. *Commoner timbers to be used by the Public Works Department.*—The attention of the Public Works Department might be directed to utilizing some of the so-called inferior woods, many of which are as well suited for indoor work as satin and milla. When low depôt rates are fixed for the former, they will no doubt be used largely, but in the meanwhile the Public Works Department might afford considerable assistance in drawing attention to their value. Palé timber might probably be used more largely for bridge work, &c., if a stock of suitable logs is always kept in depôt.

THE SALE OF EBONY AND OTHER CABINET WOODS.

321. There is no competition for ebony or flowered satinwood out of Colombo, and as all shipments are made from that place it will be better to sell these woods there only. As soon as satinwood arrives at the provincial depôts—or, if possible, in the forest before removal—it should be examined, and any flowered wood marked; it should then, like ebony, be sent direct from the forest to Colombo, exposure to the weather being avoided as much as possible.

322. *Export timber depôt in the reclamation ground.*—As a large proportion of these woods will arrive by sea, and will again be exported, it will be more economical and convenient to have a small depôt on the harbour reclamation ground. To use the larger depôt would involve double transport—from and to the harbour, which will have to be paid for from the sale price. I would therefore adhere to my original suggestion to have a timber depôt for the export timber close to the harbour, where logs could be hauled into place without being put on a cart. Here, too, halmilla and other timber brought from the eastern coast might be kept. The reclamation ground is now being extended, and as I understand a local firm intends to stack its timber there, I trust that a depôt site may also be reserved for Government. The convenience to shippers of such a depôt will no doubt be much appreciated. In the depôt, light sheds should be put up to protect the timber from the weather. Exposed to the rain and sun, ebony rapidly loses colour and changes from jet black to grey.

323. *Ebony and cabinet woods to be sold only by auction.*—Ebony and other cabinet woods should only be sold by auction, sales being held at regular stated intervals of about three months. In selling ebony we must be guided entirely by the China and the European markets. If prices are very low it will be advisable to hold back supplies, but when wood is once put up to auction it should go to the highest bidder. If buyers do not come forward it will be a question whether shipments should not be made on Government account.

SALES OF MINOR FOREST PRODUCE.

324. *Tanning Bark.*—These comprise chiefly tanning bark and orchilla weed. Tanning bark is now collected under permit, no attempt being made to control the collection. The royalty charged is quite nominal. The collection appears to go on very irregularly, and in future means should be taken to make greater use of the large mangrove swamps in so many parts of the Island, and also of the large areas in the dry zone covered with *Cassia auriculata.*

325. *Orchilla Weed.*—The increasing importance of this lichen is shown by the Customs returns, the exports of 1881—over 1,000 cwts., valued at Rs. 16,000—being double those of the preceding year. The collection is now carried on without payment from the stunted coast forests of the Northern Province and Hambantota. Orchilla fetches 40*s.* to 60*s.* a cwt. in London, and as it has not to undergo any manufacturing process before being shipped it appears that the collection could well bear a royalty of Rs. 5 a cwt. The collection should in future only be allowed on permits issued by the forester.

326. *Grazing dues.*—Grazing dues are now collected by the Forester of the North-Central Province from the cattle dealers using the large stretches of grazing land towards Minéri and Tamankaduwa. This should constitute an ordinary branch of the forester's duties, and be systematically carried out. The right to graze cattle over certain tracts should be sold annually, the receipts being credited to forest revenue.

TIMBER TRANSIT CONTROL.

327. The adoption of efficient means for checking the control of timber in transit is most important. Under the existing Timber Ordinance, all timber, whether removed from Crown or private land, has to be covered by a permit. Owing to the wording of the Ordinance, or the interpretation put on it, difficulties have arisen in putting in force what was no doubt the intention of the Legislature, namely, that previous to its removal from the forest all timber should be inspected and stamped by a trustworthy official, and that whilst in course of transit from the forest to the market any timber not so stamped and unprovided with a permit should be liable to seizure.

328. *Cause of the failure to secure effective control.*—The difficulties that have occurred need not be alluded to again. They have arisen chiefly from a want of uniformity of system, from no responsible official being entrusted with the duty of supervising the work of petty headmen. The checking of timber cut in a wet forest, swarming with leeches, is no pleasant duty, and unless well supervised is certain to be quite nominal. I believe it is not seldom the case that headmen hand their timber stamp over to a peon or cooly, and issue the removal permit without having seen the timber. In one Province timber is stamped, in the next no mark is put on and a permit only is issued, whilst in a third no permit is even insisted on. The rules are very laxly observed, and so liable to change that, when in the Southern Province in company with the forester some rafts were seized for being unstamped, we found out orders had been suddenly issued to discontinue stamping. Unless a hard and fast rule is sanctioned, made generally known in the *Government Gazette* and kept to, the stamping is but too liable to be made the medium for extortion. The authority of the Government officials, too, is so ill-defined as to make the duties of checking timber a matter of grave personal responsibility.

329. The control of all rivers, canals, and their banks, as regards the floating of timber and other forest produce in transit, must be vested in Government, which will make rules to regulate the transit of timber. It may be supposed that the carrying out of the suggestions made here will involve much inconvenience to the public and to the timber trade. They are, however, nothing more than the existing provisions of the present Ordinance cast in a practical form. When the forests are so large and so irregular in boundary, the only efficient means for preventing theft is to watch the different outlets for the timber, and to detain all not covered with a pass and unstamped. Means are required for enforcing this principle, which has already been recognized by the Legislature and by Government.

330. *All timber from Crown forests to be stamped, &c.*—All timber felled in Crown forests will be in future stamped before removal, and each cart, or batch of carts, or raft, provided with a pass specifying the description and quantity of timber.

331. *Regarding private timbers, the existing regulation to be retained in principle, although slightly modified in detail.—Rules regulating the transit of private timber.*—The same regulations must be observed with regard to timber cut on private land; to protect the Crown timber, and to prevent its being removed as private, the retention of the existing regulation is advisable:—that no timber shall be removed from private land without a permit signed by the Government Agent or by a duly authorized person on his behalf.

The following rules are suggested:—

When a person wishes to remove timber (including firewood) from his land, he shall give notice of his intention to the nearest headman, who shall forward his application to the Government Agent. The latter, through the forester, will issue orders, either issuing a permit to remove without stamping—the latter being unnecessary where there is no chance of Crown timber being stolen, such as in the neighbourhood of Colombo and in most of the planting districts—or stating that the timber will be inspected and stamped by the forester or headman on a certain date, when the necessary removal permit will be issued.

332. *Stamping of timber to be deputed to headmen at Forester's discretion.*—In some cases the headmen must be entrusted, at the forester's discretion, with the inspection and stamping, especially as in parts of the moist zone, where much timber is cut on private land, this duty would occupy the Forester's entire time; but all the arrangements should be made by him, and nothing must be stamped except with his permission. In all cases he only will issue the permits.

333. *Form of the removal permit.*—The permit should specify the kind, the quantity of timber, its marks (both Government and private, so as to admit of its recognition), the land whence it is to be removed and where it is to be taken to, and the number of days within which the timber must be removed. If to be removed in several trips, each trip must be accompanied by its permit, which after expiry should be returnable to the issuing officer.

334. *The transit of timber on the roads and rivers to be controlled.*—To enforce an observance of these rules, and to prevent timber stolen from Crown land being sold, checking stations must be established on the principal lines of communication.

335. *River and canal rafting permits.*—The transit on the rivers and canals must be managed by river rules, such as those in force in India. At the head of each river, at some place where most of the timber can be checked, a responsible official must be stationed to examine all the rafts that come down and to see whether their contents are covered by removal permits. For these a rafting permit must be substituted. The latter must specify the kind, the quantity of timber, the marks, &c. Legal power must be given under the rules for compelling all rafts to pull up at the checking stations; to provide themselves with permits—those unprovided being subject to seizure; to authorize the stopping of all rafts and boats carrying timber, and their detention until satisfactory evidence as to ownership is produced, &c.

336. *Control in transit and on arrival.*—During transit, measures must be taken for controlling all rafts and boats at a checking station, and by patrolling the river. Before the rafts and boats reach the place where they will be broken up or unloaded they must be finally checked. All

timber, for instance, arriving at Colombo by the Kelani and by the Negombo and Kalutara canals should be checked, before being broken up, at the railway bridge or at Grandpass.

337. *Control on the roads.*—For roads on which much timber is carted similar arrangements may be necessary, and although regular checking stations may not be established, the contents of timber carts should be frequently examined to see if they agree with the removal permits.

338. *Entire transit control to be under the Forester.*—For these arrangements to work properly, it is necessary, in the first place, that the entire timber transit control should be under the forester, and that the headmen should be subordinate to the latter, acting on behalf of the Government Agent, in whatever duties may be allotted to them. We shall otherwise have divided control, which is worse than useless.

339. *Uniformity throughout the Colony necessary.*—A general set of rules is required applicable to the whole of the Colony. Although their detailed application may vary, the anomaly of effective control and the charging of a small fee for stamping in one Province and their absence in another appears quite unwarranted by any difference of circumstances.

340. *All timber must be stamped.*—It is scarcely necessary to point out that all timber must be stamped and marked with the owner's private mark. These marks must be registered with the forester. It is impossible to control unmarked timber. The entire transit arrangements will be specially supervised by the Conservator, and the system on which the timber stamps are arranged will be such as will admit of our recognizing timber at once, whether it comes from Crown or private land, and from what part of the Island.

341. *No timber to be shipped without a pass from the Forester, or, in Colombo, from the officer in charge of the depôt.*—When timber is shipped now, no steps are taken to ascertain from the Government Agent and the forester if it has been honestly obtained. Formerly, when the revenue officers had charge of the forests and also of the Customs no timber cut was shipped without a forest permit. It is now most advisable to have this system restored, under which all persons wishing to ship timber must produce to the Customs authorities a pass signed by the forester or the officer in charge of the local depôt, stating what quantity of timber can be shipped, and its marks. The Customs officers will then be able to exercise some control. When only timber will be sold through the timber depôts, there will be no hardship in enforcing this rule, whilst it will put an effectual check to the shipment of any stolen timber which has evaded our checks in transit.

342. *A stamping fee to be paid on private timber.*—How the cost of effective control is to be met is another important point. On the Indian rivers a small fee per log or per cubit foot is charged for a rafting pass, which contributes towards the expenses of the control staff. In Ceylon, the same principle has been followed in the Eastern Province, and till recently in the Southern Province, by providing for the payment of a small stamping fee. There are many reasons for recommending that the system should be extended to the other Provinces. Nearly all the private land from which timber is removed has been sold by Government for cultivation for quite a nominal sum, and a small fee may fairly be levied on the timber as a contribution towards the protection of the remaining Crown land, although it will not by any means cover the expense. The owners of forest land and of timber will be benefited to a considerable degree by theft of timber becoming most difficult. All timber will be scrutinized in transit, and if stolen from private land—as not unfrequently happens, I believe, in the Kalutara District—it will be detained.

The following is the list of charges sanctioned by the Colonial Secretary, in 1875, for the Eastern Province :—

	Rs.	cts.
1 to 10 pieces, each	0	50
1 to 20	3	0
30	3	50
For every additional 10 pieces up to 100 ...	0	50
For every 50 or part thereof over 100 up to 500 pieces ...	1	25
For every 100 or part thereof over 500 pieces ...	1	25

343. These rates are high, and are likely to be evaded. The substitution of the following scale is suggested :—

For logs over 18 inches girth.

		cts.
From 1 to 10	(each)	50
Over 10 logs up to 50	„	40
Over 50	„	25

For scantlings and poles 18 inches girth and under.

Up to 50 pieces	„	4
Over 50 pieces	„	3
Bamboos and small jungle sticks, ...	(per 100)	25
Firewood	(a ton)	25

The receipts on timber inspected and checked by the forest staff would of course be credited to revenue; in the case of the headmen it might be one of their perquisites, as at present, if the duties are efficiently carried out.

The levying of fees will be provided for by the powers reserved to the Governor in chapter VI. of the proposed Ordinance to make rules regarding this and other matters connected with the control of timber in transit.

CHAPTER X.

PROTECTION AND IMPROVEMENT.

PROTECTION.

344. Before spending money on improvements, it is necessary to protect our areas against trespass, the most destructive form of which is chena cultivation.

Until the reserved forests are demarcated, it will be most difficult to protect the best forests, but as this work proceeds, and information is collected, we shall be able to take special precaution for protecting the best timber localities; but the protection of the large areas which will not be reserved, will always be most difficult for the forester. If the chena cultivators could be confined within certain limits, if they could be compelled before making a clearing to get a permit, and if some settlement of the various claims put forward could be placed on a definite basis, the chena question need no longer cause anxiety; but as long as this is not done, the forest areas must gradually decrease. We must look entirely to Government and the revenue authorities to inaugurate measures of this sort.

PROTECTION OF THE RESERVED FORESTS.

345. The paths forming the demarcated boundary round these must always be kept clear; they must be regularly patrolled, and all the boundary marks carefully maintained.

WORKS OF IMPROVEMENT.

346. To increase the proportion of the valuable timbers, to assist the natural reproduction, and to turn some of the large areas now covered only with scrub into productive forests, cultural operations on a large scale must in the future largely occupy our attention.

It will be convenient to distinguish *thinning*—more correctly expressed by the German term *auslaüterung*, or the weeding out of the valueless woods, accompanied by sowing or planting to assist the natural vegetation—from *plantations*, which include *regular plantations*, or those carried out by labour paid directly by Government, and *chena plantations*.

THINNINGS.

347. The remarks here relate chiefly to the forests of the dry zone. In these, the proportion of good saleable timber to unsaleable or valueless is very small. Of the former, in few forests are there more than five to ten trees to the acre: when they are cut out, the species become almost extinct, being replaced by the worthless kinds.

348. *Gradual extinction of the better kinds of timber going on in all the forests of the dry zone partly due to natural causes.*—This process goes on with all the saleable kinds of timber growing in the dry zone, although in the case of certain trees—satinwood and ebony, the former especially—it is somewhat more marked, owing to natural causes, the principal ones of which are the relative want of natural vigour and rapidity of growth when young, and the inability of the young seedlings to grow in the shade of other trees. There are other causes at work, too, and in certain forests which the axe has never touched we see the same natural tendency towards a change of crops. The satinwood consists only of old mature trees, which in time must die off; there are no young trees to take their place; so it is evident that in making a clearing of the old timber, we only bring about prematurely what must happen naturally in course of time. The same process may be noticed in the halmilla forests. Halmilla is a tree which bears shade well, of vigorous growth, and in certain situations, such as on river lands, is able to force its leader through the densest chena scrub; yet, although it seeds freely every year, there is no reproduction in some of the comparatively open forests of the South Batticaloa District, where the remains of the fine original forests now standing show the soil and other natural conditions to be most suitable.

349. *Areas too large for planting or sowing.*—It becomes a question how this process can be counteracted. To supply ourselves with timber our annual fellings have already to cover very large areas, and when the necessity of leaving a certain number of seed-bearers is recognised, instead of cutting out every suitable tree that comes to hand, we shall have to work over tracts still more extensive. In any case they will be so big that planting or sowing would be out of the question, as indeed any other work requiring much labour and attention.

350. *Difficulty in procuring labour.*—Hired labour cannot be had in the forests; the only people possibly available are small numbers of Sinhalese and veddahs, living in scattered villages surrounded by forest, who support themselves chiefly by chena cultivation. They are indolent and averse to manual labour of all kinds, even to timber felling. Their only tool is a kathi or bill-hook, and the only assistance they give now in the forests is to hunt out good timber and to cut a path to each tree, all the felling and logging operations being done by Muhammadans or Tamils from the coast districts. Regular cultural operations are therefore out of the question, and the labour supply for even the roughest work will be most uncertain and difficult to manage.

351. *Objects in view.*—Our objects will be—

(*a*) To assist the natural seedlings, and to prevent their being overgrown by the worthless trees.

(*b*) To increase the proportion of the better kinds of timber.

352. *How the natural seedlings are to be assisted.*—To assist the natural seedlings it is suggested that in certain selected areas in which the annual fellings take place, simultaneously with or previous to the latter, the greater number of the valueless trees should be cut out. It is also proposed to make a similar clearing on certain areas now fairly well covered with young satinwood, but where there is no timber fit for felling. The former case will first be dealt with.

353. *Effect of cutting out the worthless timber.*—The valueless trees now form a close-grown forest: it is believed that by clearing the greater part of them away, and at the same time taking special care to protect the existing young valuable seedlings and trees, that these will grow up in much greater numbers and with greater vigour than at present; also, if it should be possible to postpone the timber felling till eighteen months after the thinning, that by giving light and air to the soil a large number of seedlings will spring up round the mature satin and other trees before they are removed which will stand a good chance in the struggle with the coppice shoots of the worthless trees.

354. *The area cleared to be sown when there is an absence of parent trees.*—It is not, however, always possible to secure seed reaching the soil immediately a clearing is made. Often, and indeed generally, I fear, in Ceylon, the ground is incompletely stocked with parent trees. So, in order to increase the proportion of the better timber trees, and to introduce them where they are absent, it is proposed to accompany the thinning operations by artificial sowings.

355. *What trees are to be removed.*—The work of thinning should, if possible, precede the felling of the good timber by eighteen months or two years. It is extremely doubtful if this will be possible on account of the difficulty of removing the timber with so much timber and brushwood lying about. Should this be so, the thinning must be simultaneous with the felling of the timber trees. The trees that most require thinning out are venangu, mora, morali, taintuki and vedekanari, which throw a dense shade; veré does less harm, and, unless in very large numbers, will be beneficial in giving the seedlings partial shade and protection. The saplings, too, will soon outgrow them when they have once made a good start. The undergrowth of kaian, &c., must also be cut. The entire area operated on should be cleared, not only in alternate strips, which would soon be overgrown.

356. *What proportion to be thinned out.*—It will depend on the existing *timber* growth, and on the species which it is intended should form the principal species in the new growth, as to the proportion of the worthless woods which we remove. Young satinwood require a great deal of light, whereas ebony, halmilla and rana appear to thrive best in partial shade..

357. *How to be cut.*—The trees and bushes should be cut 18 inches above the ground, as they will then coppice less readily; and they should be made to fall, as far as possible, in one direction, to make locomotion in the clearing less difficult. The wood will be left on the ground to decay. Round the clearing it will be useful to pile up a rough fence to keep out deer and elephants.

358. *Danger from fire.*—Precautions will have to be taken against fire for the first twelve months. If a large area is to be cleared it should be divided into 100-acre blocks by strips of forest 50 yards wide left standing, so as to prevent fire spreading over the whole.

359. *The sowing.*—The sowing will only take place over selected areas where the soil is sufficiently good and where there is a marked want of parent trees. It should be done before the clearing; and the latter will, of course, be in August, before the north-east monsoon, soon after most of the seeds have ripened. The covering up of a certain number of seeds which this will involve is unavoidable when the presence of seedlings already growing has to be considered. Where the whole area is to be sown equally—*i.e.*, where there are no seedlings already, the seed should be sown in small hoed patches, ten feet apart, immediately after the clearing. In the former case, the seeds will be sown similarly at ten feet distance from other trees or seedlings.

360. *What species to be sown.*—In selecting the species for sowing, endeavours must be made to grow a good mixed forest. Satinwood with its thin foliage will never grow well alone, and it must always be mixed with halmilla, rana or milla; halmilla on low-lying land may be grown alone with palé; teak might with advantage be introduced in the clearings.

361. The selection of the areas to work on must rest until the work has passed the experimental stage on the vicinity of villages, for the labour supply will at first constitute the main difficulty. The following may be mentioned as the most suitable areas as regarding soil and the standing timber:—

NORTH-CENTRAL PROVINCE.

Tamankaduwa.—The narrow belt of forest bordering the Mahávili-gaṇga. Reproduction of halmilla, churapunné, rana.

Alut-oya.—The forests on either side of the Trincomalee road. Reproduction of satinwood and ebony; halmilla to be introduced.

Morekawe.—In the Kalpe kóralé there are several good forests where the reproduction of halmilla requires assistance.

Padivil.—The forests south and east of the tank. Sowing of halmilla.

NORTH-WESTERN PROVINCE.

The forests within a ten-mile radius of Puttalam..

Pallakelé Forest.—Reproduction of ebony and introduction of yavarani and halmilla.

EASTERN PROVINCE.

Arrogam Bay.—Forests in the neighbourhood of Lahugalla and Arrogam Bay. Reproduction of halmilla.

FRIAR'S HOOD COUNTRY.

All the forests near the new irrigation tanks are well suited for improvement fellings.

362. *Improvement thinnings not combined with the felling of timber.*—The areas where the thinnings will not be combined with timber-felling will be treated similarly, except that the ground being usually well covered with seedlings, sowings will not be necessary. Areas of this sort will of course be only rarely found, but it is probable that suitable patches for working on may be selected after good seed years.

363. *First experiments to be made in the Eastern Province.*—The earliest experiments should be made in the Eastern Province, north-west of Válaichchénai, near Ponani, where considerable tracts of rather poor forest, originally with a good deal of ebony and satinwood, have now little valuable timber. There are no satinwood saplings, but in places the ground is covered with small seedlings apparently only requiring light and air to shoot up.

364. *The cost of thinning.*—The question of cost will rest on the readiness with which the Siṇhalese undertake the work, and at present it is quite impossible to frame any estimate. The villagers may be expected to do the clearing for a very small sum—Rs. 1·50 to Rs. 2·50 an acre—if there is not much large timber. Had Tamil labour to be used, it would cost Rs. 10, and the work would be less well done. The sowing should not cost more than Rs. 1·50 an acre, including the collection of seed.

365. *Experimental clearings might be made by the Forester's baggage coolies.*—A commencement should be made by clearing a few acres in different situations, and much might be done without specially hiring labour. The foresters at present are allowed a large staff of baggage coolies, who, instead of remaining idle whenever a couple of days' halt is made, might be usefully employed in clearing small experimental areas. Until these have been made, and we can see some certainty of work being attended with success, it will be useless incurring any large outlay.

366. *Only a tentative measure.*—Such are the rough outlines of what appears to be the only practicable plan of maintaining, without large expenditure, the growth of good timber trees in the dry zone forests. The details must be gradually developed as the work proceeds. Nothing of this kind has as yet been attempted, and only a small commencement must be made. It is by no means certain that the operations suggested will succeed—indeed, it is probable for complete success, that more elaborate ones may be necessary; but they will take the direction which any future work of this sort must follow, and they will, by giving us at little cost some experience in the treatment of the different species, be of considerable assistance in directing our future work. If they succeed, operations on a large scale and the use of Tamil labour may be desirable, but for the small operations which are contemplated at first, it is hoped that the village Siṇhalese and veddahs will be found willing to do the work which appears not uncongenial to their tastes.

PLANTATIONS.

367. *Teak.—Small isolated blocks only planted as yet.*—Plantations have so far been a failure. Cultural operations have as yet only been attempted with teak: nothing has been done with the indigenous woods. The error has been everywhere to make so-called experiments in the form of small scattered plantations. As it has been known for the last 200 years that teak will grow well in Ceylon, experiments are out of place. What we want to know is whether, when grown in large masses, pure or mixed with other woods, teak will grow to a marketable size. Instead of making a commencement in some spot where large extensions are possible, only small plots have been cultivated—the soil often quite unsuited—which are surrounded on all sides by village land and cultivation. Every new officer selects some new spot for planting, which, after he has left is lost sight of and neglected.

368. *Expenditure too heavy and the results valueless.*—The expenditure, too, on the plantations has been on a most lavish scale, especially in the Southern Province. In the North-Western Province the initial cost of Rs. 30 an acre for clearing the jungle is so heavy that further extensions cannot be justified by the results expected.

"Experiments" of this sort are a great waste of public money, and are perfectly useless. Neither teak nor any other tree yields good timber if grown in small isolated clumps, and if sixty years hence any timber can be cut in the Southern Province it will have cost, with capital expenditure and interest, treble the price of the best Burmah teak.

369. *Treatment proposed for existing plantations.*—With regard to the existing plantations, I should recommend that all further expenditure on cultivation and supervision be at once stopped. The plantations of Kekanadura and Hali-ella, in the Southern Province, should be roughly fenced in, and a small annual payment made to the headman or to some respectable inhabitant of the neighbouring village to prevent theft. The plantation near Puttalam should also be fenced and looked after, with the rest of the forest it stands in, by the forester. An early opportunity should be taken for utilizing the timber, as it will never grow to any large size.

370. *Prospects of teak plantations.*—The Ceylon climate is so favourable, and indifferent though the soil generally is, it appears probable, from the remains of the old Dutch plantations, that teak will grow to a size fetching a good price in the Island and on the east coast of Madras. It is doubtful whether the Ceylon timber will be worth exporting to Europe, but there is every reason for supposing in well-selected situations, and if properly and economically managed, that teak plantations will yield good financial results in Ceylon.

371. *Requisites for making plantations a financial success.*—If they are to be a financial success—and with such facilities for procuring teak from Burmah and India no plantations should be made that will not repay their cost with good interest—it is necessary to begin only where at least 1,000 acres are situated in a well-shaped block. Smaller areas are as expensive to manage as larger ones, and far more difficult to protect. The land selected must, moreover, be suitable in soil and situation, and at some distance from the sea, so as to suffer less from the wind. Easy river transport to the market and the sea-coast is essential. Proximity to a town and to cultivation is to be avoided for protection from theft and encroachment. If blocks answering to these conditions can be secured and the work can be carried out economically, I should recommend an early commencement on a large scale.

372. It then becomes a question whether to cultivate teak and also other trees in *regular plantations* or in *chena plantations.*

REGULAR PLANTATIONS.

373. *Absence of data as to the cost of planting in Ceylon.*—No reliable estimate can be formed as to the actual cost of clearing and planting on a large scale in Ceylon. All work is expensive, and probably clearing, planting, weeding, &c., would not cost less than Rs. 40 an acre, which is the estimated outlay on regular plantations in Burmah. This, at compound interest at 4 per cent., would amount at the end of ninety years (the age for felling) to Rs. 1,365.

374. *Further extensions of regular teak plantations not advisable until the value of Ceylon-grown teak has been proved.*—If situated in the vicinity of a town, and the area cleared annually were small, it is probable that this outlay would soon be recouped by the thinnings. But until the success of growing teak on a large scale in Ceylon and the value of the Ceylon timber has been proved, it would be most unwise to incur any large expenditure. Except, therefore, in special cases, no regular teak plantations should be attempted in future.

375. *Plantations of the indigenous woods not recommended.*—The same may be said of the indigenous timbers—that, except in the case of halmilla and palmyra, cultural operations, involving the planting or sowing of large areas not already more or less stocked with the same species, are not likely to prove a financial success.

376. *Halmilla.*—Halmilla is likely to grow well in plantations made in fresh well-drained soil, and its cultivation deserves early attention. It would probably succeed best mixed with teak and satin, but no large works should be undertaken until warranted by the results of exhaustive experiments.

377. *Palmyra.*—The palmyra will grow on all light sandy soil, and its cultivation is so easy that I would draw the attention of Government to the importance of utilizing some of the enormous areas of sandy waste, now only covered with low bushes and scrub, lying in the Jaffna peninsula and bordering on Elephant Pass at Mannár, Puttalam, Chilaw, Hambantota and Mullaittívu.

Throughout the dry zone, especially near the coast, the palmyra grows very well. At Hambantota, where only a few stunted suriya trees can be grown, the palmyra stands, and if planting it were taken in hand systematically the drift sand which now threatens the town might soon no doubt be fixed.

378. *Details of cultivation, cost, and returns.*—All the cultivation necessary is to make a hole in the ground, to put in a palmyra nut, and fence in the area so as to keep cattle out for three years. At the end of that time the palmyras can take care of themselves. The entire cultivation costs two or three rupees an acre with hired labour. If jail labour is used, as it no doubt might be at Puttalam, Chilaw, and Hambantota, the sole cost would be the seed. At the end of ten years the rents paid by the jaggery-makers would probably bring in considerable income. Regarding this further inquiries would be necessary, but the sale of the timber alone would handsomely repay any outlay.* The cultivation also promises in some parts to be of great benefit to the population. It cannot be undertaken by private persons, the returns coming too late, and the cost of the land when purchased from the Crown being almost prohibitive except in situations near towns and villages, where the rents paid by the toddy-drawers offer quicker returns. The jaggery industry is certainly one to be encouraged, and the liking which the Tamils have for the various edible products of the palmyra in preference to rági and other dry grains suggests a valuable means for relieving distress in years of drought and famine without exposing the forest to the devastation of the chena cultivator.

379. *Sandalwood.*—The cultivation of this tree is worth experimenting with on the eastern or drier slopes of the central hill plateau. The climatic conditions under which it thrives best are: rainfall, 20 to 50 inches; elevation, 1,500 to 4,000 feet. Information as to its cultivation will be found in the "Indian Forester" for July, 1881.

380. *Chena plantations.*—The other alternative is chena plantation. The terms on which these are now carried out have been explained in dealing with the railway fuel supply. The poorer Sinhalese, having no land of their own to chena, are glad to get Crown land on a short lease, agreeing to pay the usual dry grain tax of one-fourth the crop and to plant 450 trees to the acre, a fine of Rs. 1 being imposed for every tree less than that number when the land is taken over at the conclusion of the lease. The trees hitherto planted are jak and lunumidella.

381. *Chena plantations in Burmah.*—In Burmah, the cost of chena plantation is about Rs. 14 an acre.† The selection of the areas has to be left chiefly to the Karens, the result being that the plantations are scattered and supervision is difficult; also, as clearings can only be made on high land, they are frequently remote from the rivers.

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* What the return would be is difficult to estimate. Allowing 300 trees to the acre on attaining maturity at 80 years, half being male and half female, the value would be—at the end of 80 years—

150 male trees, at Rs. 2·50	...	Rs. 375
150 female trees, at Rs. 1	...	„ 150
		Rs. 525

This estimate is, of course, very low, and it allows for two-thirds of the trees dying off if put out at 10 feet by 10 feet. Under proper management, the proportion of female to male trees would be increased by planting out close, and thinning out the male.

	Rs.	As.
† Planting, including cost of seed	7	0
Taxes	1	5
Clearing—3 years (Rs. 2·8 + 2 + 1)... ...	5	8
Sundries	0	3
Total ... Rs.	14	0

382. *Facilities for making chena plantations in Ceylon.*—In Ceylon, chena crops grow almost everywhere from sea level to 4,000 feet elevation, and Mr. Green informs me that there will be no difficulty in the Negombo District in getting the Sinhalese gradually to work through a large area. If, as is probable, the same arrangement can be made in other parts of the Island, a great opening suggests itself for important cultural operations.

383. *Extension of chena plantations.*—How far it will in the future be possible to extend chena plantation must rest entirely on the restrictions placed on the clearing of chenas. In considering this, as indeed *all points* involved in the forest question, we are met by the same difficulty,—that until a settlement is made as to the ownership of Crown land, and a definition of the supposed rights to clear chenas, all forecasts are most hazardous. If, as in the Western Province, chenas are only allowed on Crown land on permit, and the Government Agent and his Assistant take a personal interest in plantation work, large extensions on these or similar terms will be possible, will be a success. If, on the other hand, chenas are allowed *ad libitum*, and the revenue officer takes no interest in the work, and does not use his influence to get the terms of the lease complied with, there will be no progress.

384. *Early commencement advisable.*—A commencement should be made with as little delay as possible in two or three districts where the work can be properly looked after by the foresters. Efficient and constant supervision is absolutely necessary. It will be far better to make a small beginning, and for the people to learn at once that the conditions of the lease will be strictly enforced, as in the Negombo District. Planting leases should be only given to cultivators, and not distributed broadcast through the headmen to officials and their relations to sublet to the cultivators.

385. *The granting of chena plantation leases.*—Considerable discrimination will have to be shown in granting leases, and it will be well to give some inducement for the cultivators to comply with our wishes. This might be done by giving up the Crown grain duty and by a small money payment. In any case this will probably be found more effective than a penalty which could never be enforced. If the ground is to be fully stocked with teak or any other tree, the yield of the chena crop will be considerably diminished, and some compensation must be given. If the work is done well, what form this compensation takes is immaterial, for at a cost quite nominal we shall convert land of comparatively little value into good forest.

386. *Terms of the lease.*—In other respects the terms of the leases will be similar to those suggested for the railway fuel reserves. Cultivation should not last over twelve, or at the outside more than eighteen months, and during the next two years or eighteen months the cultivators must agree to keep the trees clear of jungle and creepers. No plantains must be allowed, and the crops should be confined to dry grains and sweet potatoes. With easy terms, chena plantations will no doubt become popular, as amongst the Karens. The system must, however, be gradually introduced ; it must be distinctly understood that only areas already declared reserved forests are to be planted, and the planting leases must not be made an excuse for obtaining permits to chena only.

CHENA PLANTATIONS IN THE MOIST ZONE.

387. The most suitable areas for chena plantations will be found on the rivers of the western coast, where there are large areas covered with poor forest of little value except for fuel and jungle sticks. Areas of this sort should be commenced with. Subsequently better forest can be cleared, but it will be unwise to cut good natural forest until success is certain. Having selected the area, the first step will be to demarcate it, and to settle all rights, for it need not be pointed out that a plantation must be free of private claims.

388. *Mixed plantations to be first made.*—At first it will be well not to plant teak pure, but mixed with other trees, such as jak and lunumidella. A mixed growth will be preferred by the cultivators to the dense shade of the teak, and the great value of lunumidella for rafting the jak will not be lost sight of.

389. *Details of the cultivation.*—The teak seedlings should be grown in nurseries (in time to plant out in the South-West monsoon) which might be kept up by the forester at Government expense until the people understand the treatment of the young plants. Seed should be procured through the Madras Government. The plants, when the teak are to stand alone, should be put out in lines six feet apart, at six feet intervals, or in lines ten feet apart with three feet intervals between the trees. If mixed with jak and lunumidella, both of which will be sown, the former should be alternately with the teak, lunumidella occupying every fifth hole. Periodically the forester will satisfy himself that the work is being properly done, but the final counting of the plants should not take place till the cultivation is stopped twelve months or so from the first clearing. There should then be 1,000 trees to the acre ; if there are less than that number a corresponding reduction should be made in paying for the work done ; any plants in excess of 1,000 should not be allowed for. During the two years succeeding the cessation of cultivation the plants must be kept clear of creepers and jungle by the same persons who have entered into the planting lease. This is as important as the planting, and it must be arranged on terms independent of those for planting, payment for the latter being made after the final counting.

CHENA PLANTATION IN THE DRY ZONE.

390. *A means for replacing the poor forests with mixed forests of teak and indigenous woods.*—In some parts of the dry zone great use may be made of the chena plantations, and I trust that a commencement will soon be made. The Northern Province is too dry, but in the Kurunégala District and parts of the Eastern and North-Central Provinces success may be expected. The growth will be much slower than in the moist zone, but if the work is carefully

supervised it is not unlikely that it may prove a practicable plan of replacing some of the useless forests, not with fine teak timber, but with teak saplings and poles mixed with indigenous timber, giving a forest of far greater value than anything we now have.

391. *Trees for mixing with teak.*—Halmilla and teak would probably grow very well together, especially in some fresh soil on the banks of the Deduru-oya and Mí-oya; satinwood, which in certain positions shows very rapid growth, might also be tried with advantage. Lunumidella and rana will also be good woods for forming a mixed forest; the former is now becoming scarce, and its cultivation for the Indian trade merits attention.

392. *Work likely to cost rather more than in the moist zone.*—In the dry zone the work will probably cost rather more. Clearings will have to take place annually for four or five years after planting. The chena crops must be limited to the first dry grain crop of kurakkan or maize, followed by the after crop of ellu (or gingelly) and hén kękiri. Protection against fire may also be required.

CHAPTER XI.

RAILWAY FUEL AND SLEEPER SUPPLY.

THE FUEL SUPPLY.

The system under which the railway is now supplied with fuel requires a somewhat extended notice owing to the great importance of a cheap and certain supply of fuel for the economical working of the railway.

393. *Annual Consumption.*—The locomotives on the Ceylon Government railway burn both coal and wood. Of the former the annual consumption is 3,500 tons; of wood fuel the annual consumption is: on the *Lower Division*, Kalutara to Polgahawela, 30,000 cubic yards; on the *Upper Division*, Polgahawela to Mátalé and Náwalapitiya, 15,000 cubic yards. On the new extension, to be opened in two years, another 15,000 cubic yards will be consumed, bringing the total annual consumption to 60,000 cubic yards.

394. *Original arrangements.*—Up to 1877 the railway authorities made their own arrangements for the supply of fuel by villagers and others, who stacked it along the railway line. Towards the end of that year supplies began to run short, the prices charged were excessive, and people were found to be cutting from Government lands. The entire fuel supply of the lower division of the railway was consequently placed in the hands of the Government Agent of the Western Province, with the intention of preventing the cutting of fuel from Crown lands.

A fuel superintendent was appointed, under the orders of the Government Agent, Colombo, and his duties are to supervise the fuel supply, to see that a sufficient stock is always on hand, and to arrange for the protection of the Crown forests.

These arrangements have remained in force up to the present time, and the railway from Kadugannáwa to Colombo and Kalutara takes all its fuel from the superintendent.

395. *Details of the system.*—The system on which the supply is now worked consists in the Superintendent in Colombo arranging with native contractors in Colombo to keep up a supply. The contractors get villagers and others, who own land or who clear village land for chenas, to bring wood to the railway line. The contractors agree to supply fuel at a certain price, the suppliers being paid on terms arranged between themselves and the contractor. Fuel is also purchased directly from planters and others who have firewood to dispose of.

396. *Prices paid for wood.*—The prices paid for wood from private land varies according to the quality of the wood. Previous to May, 1882, the price for first-class wood was Rs. 1·25 per cubic yard. The prices now are: first and second class, Rs. 1·12½; third class, Rs. 1; fourth class, 87½ cents.

At the same time tenders are received from the same contractors and from others to supply wood from Crown forest land, at rates rather lower than those paid to persons who are supposed to supply fuel from their own land, or to have bought it from private landholders. The price now paid for the first three classes of wood is Rs. 1 per cubic yard, and 87½ cents for the fourth class.

397. *Staff.*—The staff employed in managing the fuel supply consists of a superintendent —Mr. Palmer—drawing a salary of Rs. 3,000 a year, with an overseer and a clerk.

398. *Prices paid by the railway.*—The prices now paid by the railway for fuel are: for first class, Rs. 1·37 per cubic yard; second class, Rs. 1·25; third class, Rs. 1·12; fourth class, Rs. 1. The fuel is stacked along the railway line, and a special train goes up from Colombo every second Sunday to bring it to Colombo. Before a stack is loaded into the train the class of the wood is rated by the locomotive foreman, and he gives a receipt to the owner specifying the quantity and quality. This receipt is subsequently presented at the Government Agent's Office, Colombo, where payment is made at the rates previously arranged by the forester. This amount, plus the difference shown between the buying and the selling rates given above, is recovered from the railway.

This difference, or profit, pays the salaries of the superintendent, overseer, &c., and during the time the present arrangements have been working has left a nett profit of Rs. 13,892, according to a statement furnished me by the Government Agent. The figures supplied from the Auditor-General's Office show a profit of Rs. 7,731 only.

399. *Difference in price paid for wood from private and Crown land.*—It will be at once seen that the weak point in the present system lies in the difference between the rates paid for

fuel cut, respectively, on private land and on Crown land. Until I suggested the rates being equalized, the difference was 25 cents, or 20 per cent. It is now 12½ cents, or 10 per cent. on the two first classes of fuel. Unless the wood can be seen before removal to the railway, there appears nothing to prevent wood cut on Crown land being paid for at the higher price.

400. *Seven-twelfths of the supply now comes from private land.*—During the first eight months of the current year 25,000 cubic yards of firewood were taken over by the railway. Of this amount 14,700 cubic yards, or seven-twelfths of the total quantity, were paid for as wood from private land at the higher rates.

No measures are taken to inspect the wood before it is removed to the railway. The greater part of it appears to be the charred wood off chena lands, and comes nominally off so-called private lands; but of this we have no assurance, and no means are taken, in paying for a stack of fuel at the enhanced rate, to trace the source whence it comes. The statement of the contractor or of the owner is the only guide.

401. *Present arrangements only temporary.*—In satisfying the immediate requirements of the railway, the present system appears to be fairly satisfactory. Complaints are made by the railway authorities of the quality of the wood, and of scarcity when unusually wet weather prevents the weekly supplies being carted in. This is scarcely preventable, unless a stock sufficient for one month's consumption is always kept in hand. The inferior quality of the wood arises from a large portion of it being of small size, and from the arrangements for the cutting and carriage being left to the native contractors, who in their turn leave them to the villagers. The timber is not stacked when fresh cut, but is often allowed to lie in the forest and to get rotten before being removed.

402. *Absence of measures calculated to ensure a permanent supply of fuel.*—The present cannot be regarded as a permanent or satisfactory settlement of the question, nor is it calculated to secure a lasting supply of fuel. No comprehensive measures are taken to protect the forests in the vicinity of the railway line, and whilst we have been allowing people to clear Crown village and private land to supply our immediate wants, the question of the future supply has been entirely passed over. We are *further from a permanent solution of the question than in* 1877, for during the last intervening five years the area of forest available for the fuel supply has considerably diminished.

403. *Importance of cheap fuel.*—The importance of a large and cheap supply of wood fuel for the railway will be more readily understood when I mention that the equivalent of one ton of coal for heating purposes is 10 cubic yards of good firewood.* The cost of the former is Rs. 22·50; ten yards of firewood at present prices cost the railway only Rs. 13·70; the actual cost to Government, if cut on Crown land, not allowing for establishment charges, is only Rs. 10; when bought off private land, Rs. 11·25.

Any failure in the supply of wood fuel would mean an additional expenditure of Rs. 12·50 in the former case for every extra ton of coal consumed. If, of the 45,000 yards required annually for the lines now open, only half that quantity could be supplied, an extra 2,250 tons of coal would be burnt, involving an additional annual outlay of Rs. 28,125. As will be seen further on, such a diminution in the supply is by no means impossible. It would mean 2 per cent. extra on the working expenses of 1881. If we include the new extension, where the haulage of coal will be a heavy item, the additional cost would be much greater.

404. *Supply of the upper division.*—On the upper division the railway authorities employ native contractors to get wood. The supply is rather uncertain, and prices are rather higher than on the lower division. At Mátalé station Rs. 1·50 is paid per cubic yard. Most of the wood comes from village chena lands, from coffee estates and gardens, and the greater part now consists of old jakwood. Gardens and estates are cleared of all their trees, and as the chenas are cleared now of the tree scrub, which always grew up formerly, they are immediately covered with lantana to the complete exclusion of all arboreous growth. The supply cannot last much longer as the quantity of jak and other trees which were originally planted as shade trees was never very large, and no measures are taken to replace those which are cut. There are no Crown forests which will serve as a reserve except at a considerable distance to the north of Mátalé, whilst within six miles on either side of the Náwalapitiya branch there is, I believe, no forest of any kind.

405. *The new extension.*—For the fuel supply of the Nánu-oya extension, 41 miles in length, there is no forest left under 5,000 feet elevation. Everything from Náwalapitiya upwards, until we approach the Great Western and the dividing range in the centre of the plateau, has been cleared for dry grain cultivation and coffee. Beyond a couple of isolated blocks, sufficient for the consumption of as many months, there is no forest left, whether Crown or private, in the whole of the western coffee districts, which would be of service for the railway.

Even the small quantities of firewood which the shade trees planted in the coffee estates at lower elevation now afford on the Mátalé branch cannot be looked for here.

406. *Haputalé extension.*—In the same way with the extension, twenty-five miles in length, from Nánu-oya to Haputalé, the only source of firewood will be the forests at high elevation; nothing can be expected on the Haputalé side. Every acre of forest has been cleared in the patana country, and from the Haputalé Pass to Badulla the only forest is a patch of 300 acres above Roehampton.

407. *Fuel supply for the railway most precarious.*—The fuel supply may therefore be said to be most precarious. For the new extensions we have to depend on the reserves at high elevation, where the forests are much wind-blown, and the growth stunted and slow; for the Náwalapitiya and Mátalé lines, we depend entirely on small and uncertain supplies from private

* Twelve yards are now allowed, as the wood supplied is not first-class.

land; for the lower division, a large proportion of the present supply comes from private land, whilst the area of Crown forest available is diminishing in the absence of any special protective measures.

408. *Permanent settlement urgently required.*—It is absolutely necessary that the whole question should be placed on a permanent footing, that it should be considered as a whole for the existing railways and their possible extensions, and that all temporising measures which we deceive ourselves into thinking effective because they afford momentary satisfaction and yield a little revenue, should be replaced by a well-considered and reliable system.

409. *Recommendations of the Committee*, 1876.—A committee, consisting of the Government Agents, Western and Central Provinces, the Surveyor-General, and the Chief Engineer Ceylon Government Railway, was appointed in 1876 to consider this question. The following were the principal recommendations made: "That all blocks of forest, any portion of which is within two "miles of the railway, or any lands within half-a-mile of any cart road leading to a railway "station, or crossing the railway, for a distance of six miles from the line on such cart road, "should not be sold until special reference has been made to the Superintendent of Railway "Forests." The committee also recommended that all railway reserves and Crown land near the railway should be cleared and planted with fast growing trees, an area of 200 acres being planted annually. These regulations regarding the sale of land did not come into force till 1878.

410. *Committee of* 1879.—A second committee was appointed in 1879, which recommended that the Fuel Superintendent be authorized to plant up two lots of 50 acres each between the 28th and 52nd mile—Rs. 5,000 being granted for the work—at Rs. 50 an acre! The selection of a reserve of 2,000 acres was also suggested. Nothing appears to have been done to carry out the suggestions of this committee beyond the selection of an area of 2,000 acres for planting, in nineteen detached blocks, distributed over a distance of twenty-five miles.

411. *Rules regarding sale of land do not apply to Central Province.*—The rules regarding the sale of forest land only apply to the Western and North-Western Provinces, the Central Province, by a strange omission, being left out. They did not come into force till 1878. If observed, they would materially assist the solution of the difficulty, but under the present system of selling land it is not likely that they will be of much service. Land has been sold within the limits fixed at Polgahawela, and in one case the land now forming Udapola estate was sold, although specially protected as a reserved forest under the Ordinance. Although two, if not three, succeeding Government Agents of the North-Western Province had refused for three years to sell this land, and a forester specially deputed from the Eastern Province had reported that it was most valuable for the supply of the railway and the Public Works Department, &c., an order was nevertheless given for its sale by the Colonial Government.

412. *Danger from chena cultivation not noticed before.*—But it is not from the sale of land that the chief danger is to be feared. If land is cleared for chena it becomes as valueless for the fuel supply as if cleared for paddy cultivation. This point appears to have escaped the notice of the committee, and consequently natives are allowed to chena close to the railway, with as little restriction as elsewhere.

413. *Proposals for planting not likely to be of much good.*—The proposals now made for planting up certain areas will not lead to any practical result. The present Fuel Superintendent has selected four out of the nineteen blocks mentioned by Mr. Horsford, and proposes planting them with teak, jak, domba, del, kahata, keena, and whip (Casuarina) trees, at a cost of Rs. 50 an acre. Apart from the fact that some of these trees are not at all suited for a full plantation, the planting of small isolated blocks is useless. The protection of a large area does not cost more than of a small one, and it will be apparent what cost of supervision and waste of labour must be involved if to secure 212 acres of fuel reserve we must take up four separate patches.

414. *The only secure basis for work is to form large fuel reserves.*—The only way in which we can hope to secure a permanent settlement of the fuel supply question is, as in the case of other forests, to form large fuel reserves in convenient positions along the railway line. The area of the blocks must be sufficient for the annual fuel supply, allowing a liberal margin for all future increase in the consumption. If the natural forest growth is not satisfactory, it must be improved by artificial means.

SELECTION AND IMPROVEMENT OF THE RAILWAY FUEL RESERVES.

415. *As in the case of other reserved forests, demarcation necessary.*—All that has been said with regard to other reserved forests applies with equal and even greater force to these. In the case of ordinary reserves it was pointed out that unless the boundaries are carefully demarcated, and their care becomes the special duty of a responsible and permanent official, their existence as forest is strictly limited. This may be said with even greater truth with forest on either side of a railway, where land acquires an enhanced value. The railway attracts people from the villages, and as the population increases, encroachments progress rapidly. It is for this reason that a rule like that sanctioned on the recommendation of the committee is valueless. Unless we first ascertain what forest there is it is useless to think of its effectual protection.

416. *The object of forming fuel reserves.*—The objects with which these reserves will be formed will be to secure at the lowest possible cost of production a large and certain supply of firewood. We must not be satisfied with securing sufficient for the present annual consumption. Endeavours must be made to increase the supply, to keep down the cost, and to improve the quality of the wood, so as gradually to replace coal with wood fuel. The saving which might in this way be effected would be considerable. With the natural conditions so favourable in every way there is no reason why wood should not take the place of coal entirely when the railway authorities express their readiness to take as much good wood as is offered.

THE LOWER DIVISION.

417. *From Kalutara to Kaḍugannáwa.*—The consumption on this division from Kalutara to Polgahawela is 30,000 cubic yards, but including the fuel required for working the engines from Polgahawela to Rambukkana and up the incline the quantity of fuel required is about 40,000 cubic yards. The whole of this should come from the low country forests, and it will be simpler to consider this part of the line separately.

418. *Solid contents of stacked wood.—Area of fuel reserve required.*—The solid contents of stacked wood is only 65 to 70 per cent. of the gross cubic contents of the stack; for the annual supply of 40,000 cubic yards, 720,000 cubic feet of wood will be required. Taking the annual rotation of the fuel reserves at 15 years, and the standing timber after 15 years' growth at the low estimate of 1,500 cubic feet per acre, 480 acres must be cleared annually to supply 720,000 cubic feet; 7,200 acres will then be the area of reserves necessary for the annual fuel supply.

419. *Reserves to be close to railway line.—Forests from Colombo to Kaḍugannáwa suitable as reserves.*—The reserves are required to be as close as possible to the railway line, and the nearer they are to the engine stations—Colombo, Rambukkana and Kalutara—the less haulage there will be. From Colombo upwards as far as Míríigama—30 miles, no large areas of Crown land are left in the vicinity of the railway. Along the intervening fifteen miles between this station and Polgahawela the whole of the level country on both sides of the line appears to have been repeatedly cleared for chena, but on the hills, at distances of one or two miles, there is some fine forest. Passapollekanda and Horenekanda, opposite the 39th and 40th miles, are large forests on the left banks of the Maha-oya. There are other forests further on, all of course more or less cut into by chena clearings, but suitable as the nucleus of large blocks. Near Polgahawela there are still about 1,000 acres of the Maragala reserved forest left unsold. This, and the patches of forest about five miles west of Polgahawela known by the name of Polkatukanda and Kohilani-Galkanda, might probably be formed into a considerable reserve by including some of the chena clearings. Three miles from Rambukkana is the Tumpané forest, on the borders of the Central and Western Provinces. East of Liberia estate there is a fair-sized forest.

420. *Preliminary examination suggested.*—Maps of the country onboth sides of the railway line have been prepared by the Surveyor-General showing the areas of Crown land already sold. I have suggested to the Government Agent, Western Province, that wherever the map shows a conveniently-shaped block of 500 acres of Crown land may be had, that the country should be carefully examined to ascertain what extent of forest is left.

421. *Principal fuel supplies to come from forests on the Kelani and Kalu gangas.*—Near the seaside line to Kalutara there are of course no forests, and we must look to the forests up the Kelani and Kalu gangas for a large supply. On the Kelani forests the first call will still be the ordinary timber and fuel supply of Colombo, and it is doubtful whether they will be sufficient for more than this. On the Kalugaṇga there are still large areas uncleared, and from 4,000 to 6,000 acres of reserves could probably be secured close to the river within eight to ten miles of Kalutara. Water carriage is so cheap in the Western Province that it must be seen whether it would be better to take up the whole area required along this river and its tributaries in preference to the more scattered reserves along the main railway line. Expense will be the principal factor in deciding questions of this sort. On the Kalugaṇga, virgin forest will probably be obtainable, or areas more or less covered with trees, whilst in taking up large areas towards Polgahawela, works of improvement, supervision, &c., will at first form a heavy item of expense.

422. *Attempts made to improve the forests along the railways.—Successful chena plantation.*—Attempts hitherto made to improve the fuel forests have failed owing to their not being systematically carried through. A few small chenas have been sown with wá (Cassia siamea), but they have failed except near Míríagama, where a small area was let out on a planting lease for four years to Dureyas, and sown with jak, lunumidella (Melia composita), and domba (Calophyllum inophyllum). The latter is unsuitable, but with the other trees the success has been very remarkable. The chena is eighteen months to four years old, and the oldest lunumidella are twenty feet high and eighteen inches in girth; the jak are smaller, but generally the ground is fully covered. The land recently cleared has at present a crop of amu; in this jak trees ten feet high are standing, which, when the crop is reaped, will be able to take care of themselves with the slight clearing which the cultivators, under the terms of the lease, are bound to give up to the end of the fourth year.

423. *Similar to the Toungya plantations in Burmah.*—The principle on which these chenas were sown is similar to that of the Toungya teak plantations in Burmah. But, whilst there the cost of planting has averaged up to the present almost Rs. 10 an acre, the operations in Ceylon not only cost nothing, but bring in the usual chena tax of one-fourth the produce. Mr. Brandis, Inspector-General of Forests, estimates the cost of extending the Toungya plantations at Rs. 14 an acre. In Burmah, bamboos are apt to overtop and kill the teak, and they have to be cleared for three successive years. In Ceylon, we are not troubled with bamboos, and as usually the chena is cultivated for eighteen months or two years, there is little fear of the undergrowth doing much harm.

424. *Recommendation that large areas be selected for chena planting.*—The Míríagama work is most satisfactory, and if we cannot secure large areas of old forest sufficient for our requirements, an inexpensive plan is offered of gradually restocking the whole of the chena lands near the railway.

The matter has now got beyond the experimental stage, and I would strongly recommend that simultaneously with the selection of older forest for the formation of reserves, measures be taken to secure areas of old chena scrub or of poor forest for planting on chena leases. There are large areas along the railway line, where, although the soil is good, the original high forest

has failed to re-establish itself after once being cleared; lantana and other bushy scrub have come up, which prevent any improvement in the character of the tree vegetation: but if this scrub is kept back for two years, and seedlings of jak, teak, and wá are allowed a good start, the soil is quite capable of growing fine trees.

425. *Size and position of the areas to be first taken in hand.*—No blocks should be of less than 1,000 acres in one piece, whilst even larger blocks would be better. Taking long strips along the railway line, under the supposition that transport will be cheaper, must be avoided, as they are difficult to protect. The saving in transport is not commensurate with the increased cost of protection. The most suitable lands for commencing work appear to be in the valley of the Mahaoya, between Ambépussa and Rambukkanna. The soil here is rich and deep, and the river down which logs can be floated in high floods will assist us in disposing of the better kinds of timber.

426. *Modified terms of lease suggested.*—How far the poorer natives, having no land of their own to cultivate, will be prepared to enter on planting leases, must depend entirely on the restrictions put on the clearing of other Crown land. The terms now arranged are unusually severe on the cultivators. If the ground is to be fully stocked with 1,000 to 1,200 trees to the acre the ordinary chena crop must suffer, and considerable care is required in protecting the young trees, especially if planting instead of sowing is necessary. Although there is at present no necessity for making any payment for work done, the usual Crown demand of one-fourth the crop (or "grain duty") might be waived under the terms of the lease if the forester, after counting the trees, finds the ground fully stocked. In this case, the crop must not be reaped until the cultivator receives permission to do so from the forester, who should also frequently satisfy himself that the tenant is doing his best to keep his agreement.

427. *Choice of trees for growing in the fuel reserves.—Wá (Cassia siamea.)*—The best tree for growing in the fuel plantations will be wá, (Cassia siamea)—not to be confounded with the pink-flowered wá or wagó (C. marginata) of the dry zone. As firewood, wá with its hard black heart is preferred to all others by locomotive drivers, whilst in coppicing and the rapid growth of its coppice shoots it has no equal in Ceylon. The failure with wá in chena is due to the wrong class of persons being selected to cultivate—men who only sublet the contract, and had no real interest in the crop. No difficulty attends its growth, and at several places along the railway, where on the embankment a few seeds have been put in, it has distinguished itself by the rapid erect growth of its stool shoots.

428. *Other trees.*—Casuarina has been recommended for fuel plantations, but it thrives better in the dry climate of the eastern coast—similar to that of Madras—than on the western coast with a rainfall of over 80 inches. Lunumidella is too light a wood to make good fuel, and its coppicing powers are questionable. Jak, del (Artocarpus nobilis), godapora (Albizzia Lebbek), and milla are suitable for mixing with the wá until we are certain that the latter will grow in large masses by itself. All are rapid growers, with good hard wood suitable for fuel.

429. *Standards of lunumidella, teak, and jak to be grown.*—In places where a sale for large timber may be looked for, scattered trees of teak, lunumidella and jak should be grown in the fuel plantations, and be allowed to stand during two or more rotations of the coppice. The dense shade of the teak may be objectionable, but the other trees can be grown without harm. Teak might also partly be grown as coppice, as in most places the 15-year old poles will fetch a good price for building native houses, &c.

430. *Sowing, &c.*—In sowing, the seed lines should be six feet apart, seed being put in every four to six feet. In planting, the same distance between the lines and the plants should be kept. When cultivation stops and the land is taken over there must not be less than 1,000 trees to the acre. Of the teak, jak, and lunumidella to be grown as standards, there should not be more than forty to the acre. The crops which may be grown must be entered in the lease. Plantains thoroughly exhaust the soil; they would either kill or draw up the plants too much, and should never be allowed.

431. *Terms of the chena planting leases in the Western Province.*—It will be useful to note here what the terms of the leases given in the Negombo District are. Permission to cultivate for four years and to grow what the tenant likes, on payment of one-fourth the crop to Government, and on condition *(a)* that the land is cleared and fenced within four months, the wood being bought by Government for railway fuel at 25 cents per cubic foot*; *(b)* that such seeds as the forester gives are sown ten feet apart; *(c)* that at the expiry of the lease, when Government takes back the land, 450 trees are growing to the acre, the fences are good, and the land clear of jungle. If less than 450 trees to the acre, a fine of one rupee a tree to be payable on each tree missing.

432. *Suggestions for the future.*—Four years is too long for the land to remain in cultivation, and it should be arranged in future that the cultivation lasts for eighteen months to two years, at the expiry of which time the next piece be cleared; that for the two years following the tenants are to clear the ground of jungle twice a year, putting in fresh plants or seed if necessary; that the crops raised be restricted to dry grain, maniok† and sweet potatoes; and finally, that at the expiry of the lease there shall be 1,000 trees standing to the acre. Power should be retained to terminate the lease if its conditions are not complied with.

THE UPPER DIVISION.

433. *Fuel supply of the upper division. Absence of all forests near the railway.*—The annual consumption is about 10,000 cubic yards, but with the only Crown forests at some distance beyond the Mátalé terminus, firewood will be difficult to procure when the supply of jakwood on

* This would only apply to such cases in which superior forest land is cleared, and not to most of the lands covered with chena scrub which we should chiefly endeavour to plant.

† This may draw the trees up too much. Its effect should be carefully watched.

the coffee estates and gardens is exhausted. Most careful enquiries have been made in the hope of finding some Crown forest in the Central Province. The small forest of 80 acres on Hunasgiriya Peak is the only one less than eight miles from the railway. On the Knuckles and in the Rangala and Nitre Cave districts there are still about 7,000 acres of Crown land unsold, but these forests are too difficult of access to be of any service.

434. *Forests to the north of Mátalé terminus.*—On the Dambulla road north of Mátalé, the nearest forest is nine miles off. There are, of course, large forests still left near Nálanda, but as the cost of transport is so great when firewood has to be taken uphill for ten miles and more, it might be cheaper to bring up all we require from Kadugannáwa by rail. Already the price is considerably higher than that current in the low country, and were any large demand to arise for wood from the forests to the north of Mátalé, the price, owing to the scarcity of transport, would rise considerably.

435. *The only plan is to take up large areas for replanting in the hill country or in the low country.*—The only plan for securing a permanent supply for this part of the line is to take up large areas along the railway line, restocking them by planting. The areas we take up may be in the Central Province above the incline, or in the low country, forming part of those regarding which full details have been given. If sufficient Crown chena land in the Central Province can be had, it will be obviously better to grow our firewood there than to bring it up the incline, but there are doubts of sufficiently large blocks being available. All except small isolated blocks of Crown land have been sold or are claimed as village lands. What rights the Crown has in these, and what size of compact blocks can be formed without injury to individual interests, must form the subject of careful enquiry. If it is found that large blocks cannot be formed without great difficulty, buying some of the abandoned coffee estates is a course that may recommend itself. There are many estates, valueless to their owners, which would probably be gladly sold for small sums. In this matter the steps taken must in great measure rest on the results of the preliminary examination of the low country for fuel reserves. If good land in the latter is available, it would be unwise to pay more than a nominal price for the exhausted soil of an abandoned estate. The fact, too, that in the humid hot atmosphere at the foot of the hills the growth is so much more rapid than at an elevation of 2,000 feet, would be a powerful argument in favour of the former. The cost of production and of working in the low country must be compared with that in the hills, and it will then be a matter for the railway authorities to say whether they will have wood at Polgahawela and take it up the incline, or whether they prefer paying 25 to 30 per cent. more for fuel delivered at Kandy or Mátalé.

436. *The planting up of abandoned coffee estates a preventive of the spread of leaf disease.*—There is another important reason recommending the acquisition of abandoned coffee estates which must not be lost sight of. The only practical remedy suggested by Mr. Marshall Ward's reports on the coffee leaf disease is the separation of coffee estates by large belts or screens of trees to filter the wind of the spores of *Hemeleia vastatrix*, which it carries on for long distances to spread the disease. In opening up a new district the preservation of these belts would no doubt now be carefully attended to, but when for thirty or forty miles there is coffee in one stretch, the isolation of estates must be left to private enterprize.

On the other hand, it is well known that all abandoned coffee estates are perfect hot-beds of this parasitic fungus, whence, if by cultivation, the planting of timber belts or other remedial measures, the effects of the leaf disease are abated in cultivated estates, an endless supply of infectious spores is always forthcoming. By clearing some of these estates, the nest of the fungus would be partially destroyed; and although, when possibly only 2,000 to 3,000 acres in four or five separate blocks would be planted, the effect would be but local, every little helps. If any direct benefit was noticeable, it might lead to steps being taken for the systematic clearing of estates after they have been abandoned for a certain term, but which the owners at present are allowed unchecked to throw out of cultivation, to become a nuisance to their neighbours and the Colony. For these reasons the planting of abandoned estates, if they can be acquired, appears most advisable. It would mean carrying out a valuable experiment at little cost.

437. *Area required.—Planting on chena leases.*—The area required for the annual production of 10,000 cubic yards would be, with a 15 years' rotation, and a yield of 1,200 cubic feet to the acre, 2,250 acres, the area cleared annually being 150 acres. The cheapest method of re-stocking the land will be by chena plantations. If the work of planting is done by Government agency, clearing the scrub and lantana will alone cost Rs. 10 an acre, the sowing or planting, and clearing for two years in succession bringing the total cost to Rs. 30 an acre. Chena leases could no doubt be arranged on much cheaper terms than these, and they should also prove more successful than operations conducted by the forester without properly trained subordinates. The trees to be planted will be those already mentioned in paragraphs 427—429. The growth of standards should be confined to teak and jak, and from this source alone the plantations, if anywhere near the large bazaars in the Central Province, will probably show good returns.

THE NÁNU-OYA EXTENSION.

438. *Annual consumption.—The only forests available are the large reserves at over 5,000 feet elevation.*—On the line from Náwalapitiya to Nánu-oya the annual consumption will be about 15,000 cubic yards.

To supply this, the only forests anywhere near the line are the large reserves on the Great Western Hill and on the Elk and Horton Plains, and the large forests above the Nánu-oya terminus. At the lower end of the line, near Náwalapitiya, there is no forest, either Crown or private, and for the present the only alternatives are to bring fuel from the high-elevation reserves at the upper end of the line, or to use coal and wood brought from the low country. At first, our supplies must come from the former, but it would be unwise to trust entirely to these forests. Forests at

over 5,000 feet elevation in Ceylon are much wind-blown: the trees are slow-growing and short. In cutting out fuel, the greatest care will be necessary, and at no time should more than one-third of the standing timber be removed, whilst a very long rest of twenty to thirty years between the fellings must be allowed.

The area of the reserves is large, but until the Haputalé extension takes the railway through the largest block of forest, the absence of roads and the cost of transport will greatly limit the area which can be worked. At all times the expense of cutting fuel here will be considerable, and the greater rapidity of growth, cheapness of working, and other considerations show that it will be better to plant up suitable areas, if available, along the lower parts of this line or of that now working from Pérádeniya to Náwalapitiya, in preference to risking the permanent injury to the high-elevation forests which careless treatment would infallibly bring about.

439. *Summary of proposals.*—In conclusion, it may be useful to summarize these recommendations. *For the lower division and the working of the incline* it is proposed (*a*) to take up as fuel reserves all the good forests conveniently situated between Mírigama and Rambukkana, also on the Kelani and Kalu gangas; (*b*) to demarcate areas of chenas or scrub forest to be replanted with forest trees on chena leases.

For the upper division and the Nánu-oya extension, the selection of large chena areas for planting is recommended; until these grow up the fuel supply of the extension to be cut from the reserves on the Great Western and on the ridge south of Nuwara Eliya. The requirements of the existing line, from Kadugannáwa to Mátalé and Náwalapitiya, must in the meanwhile be supplied from estates, chenas, or native gardens, and from the Crown forests north of Mátalé, and possibly from Rambukkana, if these supplies should run short.

440. *Arrangements for supervision.*—It will now be necessary to consider what arrangements should be made for supervising and directing the fuel operations. The present superintendent is under the Government Agent of the Western Province, and although he purchases wood said to be cut on private lands in the North-Western Province, he has no right to cut firewood from Crown forests except in the Western Province. Whilst in the Western Province the forester might, through the headmen, exercise some control on the felling of timber, in the other Provinces he is powerless at present. The railway from the 35th to the 48th mile runs through the North-Western Province, yet it forms no part of the superintendent's duty to protect the forests there. In the Central Province, again, whatever wood is brought forward the railway buys, and no one attempts to protect the rights of the Crown and to prevent Crown timber being sold as private.

441. *Staff required for the low country.*—The staff required for carrying out the above proposals in the low country will consist of a forester, who will take charge of the arrangements in the Western and North-Western Provinces. Whilst the selection of fuel reserves is going on that work will require the entire attention of one officer. After it is completed there will not be sufficient to employ him, and it has been elsewhere proposed that the Colombo timber depôts, and the control of the timber transit on the lower Kelani-ganga, and in Colombo generally, should form part of the regular duties of the officer in charge of the fuel reserves.

442. *Arrangement enabling one officer to work all the reserves from Kalutara to Rambukkana or Kadugannáwa.*—As the greater part of the lower division runs through the Western Province, the existing plan of making the officer managing the fuel supply subordinate to the Government Agent of the Western Province should be retained. But arrangements are necessary by which he will occupy the same status in the North-Western Province as in the Western Province. For this the respective Government Agents will, in consultation with the Conservator, arrange a plan of action which will admit of the forest resources of the North-Western Province being fully utilized and yet sufficiently protected without the necessity of two officers being employed.

This will be a far better plan than making the North-Western Province forester responsible for any part of the fuel reserves, and will enable him to devote the whole of his time to the real timber forests of the Province north of Kurunégala, and in the Puttalam District. In the same way, should it be possible to form a forest, like Tumpané, situated both in the Western and Central Provinces, into a workable reserve, arrangements should be made for placing it also under the same officer. The revenue will naturally be credited to the Province in which the wood is cut.

443. *Forester in the Central Province to manage the fuel supply of the upper division.*—The appointment of a forester in the Central Province has been elsewhere recommended, and the arrangements for the fuel supply and the formation of fuel plantations will at first form the principal part of his duties, which will also include an examination of the country north of Mátalé for fuel and timber reserves, and the organization of a regular plan for working the forests at high elevations.

444. *Great urgency for demarcating railway fuel reserves.*—In conclusion, I would again draw attention to the extreme importance of finishing the selection, not only of railway fuel, but of general timber and firewood reserves in the Western Province. To continue the present arrangement, of placing both the railway fuel supply and the other forest work under one officer, will only involve the indefinite postponement of this most important work, and the further diminution of the forest area.

Of all the important subjects connected with forest management, none yield to this in urgency. A failure in the railway fuel supply could only lead to results most disastrous for the economical work of the railway, and although the present temporary policy would no doubt show a small temporary saving, the expense of settling the question on a firm basis must increase with every day's delay.

TEMPORARY ARRANGEMENTS.

445. *Until the new system is in full working, the current arrangements to be maintained.*—From those forests which are to be reserved little should be cut until the demarcation and reservation are completed, and proper arrangements have been made for their protection and working.

They should in the meanwhile be allowed to recover from past fellings. When the reserves are demarcated and the plantations are grown up, we shall be able to trust entirely to them for our fuel, but in the meanwhile the main supply must be drawn from private lands and from the small outlying patches of Crown forest surrounded by chenas, which are otherwise valueless, and will soon be absorbed by the latter.

On the upper division the railway should continue to make its own arrangements for wood until the selection of reserves and planting work is well started. In the meanwhile, the forester will only take the necessary steps for protecting the remaining forests north of Mátalé.

446. *Felling sites to be inspected.*—It is, however, absolutely necessary that the officer in charge of the lower division should bestir himself and ascertain, by visiting all the places where fuel is cut, whether it comes from private land or not. If fuel is cut on Crown land it must be inspected before removal. The prices now paid are very liberal—sufficiently so to remunerate private persons for fuel they sell, and under no circumstances should more be paid for wood from private than from Crown land. A uniform rate must be maintained, or there is certain to be more or less fraud. Wood should only be cut on Crown land on permit, and must always be inspected before removal. By employing sub-contractors at each of the stations, and by dealing direct with the villagers, it is very probable that a considerable reduction in the cost of working may be gradually introduced, and that by receiving prompt and full payments a larger supply of a better class of wood will be brought forward.

447. *Classification of firewood to be simplified.*—In order to simplify matters, it may be well to abolish four classes in the rating of firewood, and to substitute two only, the limits of which should be properly defined.

These classes might be taken as: 1st class—stem wood, and all wood of 3 inches diameter and over; 2nd class—branch wood, and all wood under 3 inches diameter. The prices to be paid by the railway might be fixed at the present scale:—1st class, Rs. 1·37½ per cubic yard; 2nd class, Rs. 1·12½. These leave a large margin as compared with the cost of coal, and as the cost of work in future will be greater than at present, the difference of 25 cents a cubic yard between the cost and the selling price is no excessive one, and will only cover expenses. The buying rates for all wood, whether from Crown or private land, should be fixed at: 1st class, Rs. 1·12½ per cubic yard; 2nd class, 87½ cents.

SLEEPERS FOR THE CEYLON GOVERNMENT RAILWAY.

448. Since the Ceylon Government Railway was opened in 1869, notwithstanding the enormous areas of forests in the Island, nearly all the sleepers used in the maintenance of the line have been of creosoted pine imported from England. Attempts have at various times been made to use sleepers of indigenous trees, but with no success.

449. *Satinwood sleepers lasting seventeen years.*—Originally, part of the main line was laid with indigenous satinwood sleepers, and some of these, after seventeen years' service, are as good as when put in. There are, however, no details of the number of satinwood sleepers originally used. Their further employment would be very desirable, but as has been mentioned in the introduction to this part of my report, the forests would in their present state afford no permanent supply, and there is barely sufficient satinwood for the ordinary market requirements. Cutting satinwood sleepers from the forest must not be thought of, as although it would no doubt mean a small temporary saving on the railway, would in no way compensate for the loss arising from entire eradication of the species, which must infallibly result. Satinwood in Colombo is worth fully Rs. 1·25 a cubic foot in log and Rs. 2 in scantling; the latter would be quite prohibitive, especially when teak sleepers can be bought for Rs. 9.

450. *Failure of ná sleepers supplied from the Northern Province.*—In 1879 a considerable number of ná* sleepers were sent to Colombo from the Northern Province. They were cut in a small temple grove in the Mullaittívu District, and having a good deal of sapwood were quite unsuited to the purpose. They were thought so bad that they were laid down only on an unused siding in Colombo, and are now nothing but touchwood. Ná trees have always so much sapwood, that it is extremely doubtful whether they would ever give good sleepers; certainly not, if grown in the forest of the dry zone, where they are quite exotics.

451. *Mí and palé sleepers on the Mátalé line.*—The Mátalé line, opened in 1881, was laid with Ceylon-wood sleepers by the contractors. Mí (Bassia longifolia) and palé (Mimusops indica) were the timbers chiefly used; the former came from the moist zone near Polgahawela, the latter from the northern end of the Mátalé District near Dambulla. Of the mí sleepers, when the final Government inspection was made, considerable numbers were rotten, and the contractor had then to provide 1,000 sleepers to replace them. Mr. Strong kindly had the palé sleepers examined in July last. From the Assistant Engineer's report the following extract is made:—

"Between Ukuwella and Mátalé, a distance of 8¾ miles, there are 993 palú sleepers, of which about 13 per cent. are slightly sappy, ½ per cent. rather bad, and about 1 per cent. which have been attacked by white ants to a slight extent.

"The general appearance of the sleepers is very good; they are *solid and as sound as when they were put into the road*, now about two years ago; those that have a little sap in them are not affected to a depth of more than an inch, and generally only at one end at the edge of the sleeper, and unless the sap promotes decay in the body of the sleeper, I do not think it of any importance. Those which I have marked as "rather bad," the sapwood is about two inches in depth and on the side of the sleeper, the other part

* Owing to a confusion of names these have been called palú, and the latter wood has been needlessly condemned. A Sinhalese carpenter calls any hard-wood which he cannot recognize, palú, and some ná logs were recently sold in Colombo as palú.

being sound; and those which have been attacked by white ants, I found the ants in the sleepers when I examined them, but not more than one inch from the surface."

Number of sleepers.	Slightly sappy.	Rather bad.	White ants.
993	136	5	9

452. *Mí and other sleepers supplied for Nánu-oya extension.*—A return furnished by the Chief Resident Engineer, Nánu-oya Railway Extension, shows that of 6,685 sleepers supplied by the contractor and paid for by Government up to August 18, 1882, 4,017 were mí, and 2,452 doon and buruta.*

453. *Creosoted pine sleepers: why undesirable?—Advantage of using hard-wood.*—With railway extensions going on, and the period for renewing all the sleepers on the main line rapidly approaching, the future is not re-assuring. Mr. Strong informs me that the number of sleepers required annually will be between 30,000 and 45,000. "Roughly speaking, we shall have 360,000 sleepers in the road (*i.e.*, lines now open and the Nánu-oya extension), so giving the average life of a sleeper at eight years, it will take 45,000 a year for renewals." If creosoted pine sleepers have to be imported from England they will cost Rs. 3·25 each. In the line they last from three to ten years, their average life being six to eight years. Certain substances are now extracted from the creosote before it is used for impregnation, reducing its antiseptic value. Younger pinewood is also used for impregnation, so that the life of a creosoted sleeper will in future be somewhat curtailed. In the moist climate of Ceylon the creosoted pinewood gets soft, and will not hold the rail spike. In this lies the great advantage of the hard-wood sleeper, apart from its greater durability,—that once driven in, the spike remains firm for several years, and the line keeps to gauge. For this reason, apart from any question of expense, the Chief Engineer prefers good hard-wood sleepers.

454. *Mí included in the woods that may be used on the Nánu-oya Extension.*—After the bad results attending the use of mí on the Mátalé line, it would appear very inadvisable that it be used either on the lines opened or on the Nánu-oya extension. The contract, unfortunately, specifies mí as one of the woods which may be supplied as sleepers, and there are now lying ready cut in the Kurunégala District several thousand sleepers of this wood, which are, I presume, intended for the railway extension. They have been refused by the Chief Engineer of the open lines.

455. *The limited supply of milla.*—Milla has been tried for sleepers and is found to last fairly well, but here, again, the same difficulty meets us; we can get a much better sale in the open market for the limited supply. Doon and buruta have never, I believe, been tried before; until their durability is proved, I should suggest that further purchases be stopped. For a final settlement of the question, and if cheap sleepers are to be supplied, we must use the timber of some tree growing close to the sea-coast, and in quantities sufficient at one spot to make the erection of sawing machinery remunerative. It is undesirable to have sleepers of a variety of woods—each of which would require special treatment in seasoning—and of various degrees of durability.

456. *The supply of palé for sleepers.*—The only tree agreeing with these conditions is palé. It grows gregariously over the dry zone, especially in the coast regions, forming in some forests the nearest approach to a pure forest of one species which exists in Ceylon. The principal question is its durability. For jetty and bridge piles, palé is by far the best of our woods. For general building purposes it is in little request, and the sales are small in proportion to the immense quantity of timber standing, which is probably sufficient to supply sleepers for fifty years, even if no reproduction took place. It is largely used in India, although in Ceylon, probably owing to little being brought to Colombo for sale and to satinwood being so cheap, it is little known.

457. For sleepers, it is comparatively untried. The report already quoted is distinctly favourable. If wood is likely to rot in the Ceylon climate, or to be eaten by white ants, the critical period is the first two or three years—after that it is well seasoned—and yet practically out of 993 sleepers, in two years only 1½ per cent. are unserviceable. As far as my personal observation goes, palé appears a most durable wood, and one whose quality has been much maligned. When I first suggested palé being tried, the failure of the ná sleepers from the Northern Province, alluded to above, was pointed out; but having, fortunately, been to the forest where the sleepers were cut, I was able to correct the error into which the engineers and all the native carpenters fell. It is said to crack and split, yet there is nothing to show that it is not the fast-grown ná wood from which this conclusion is drawn. All hard woods are likely to crack if, when fresh cut, they are exposed to the sun. On the other hand, palé, when used by the Public Works Department, either in logs or in scantlings, shows no signs of splitting. In order to find out why palé, so condemned in Colombo, is likely to succeed in Mátalé, I took measures to find out where the latter wood was cut, and by whom, and whether special measures were taken to secure it. The supplier informs me that no steps were taken to select good wood; none of those offered were rejected by the Government engineer, which would naturally be the case if they were split or cracked. The timber was cut from a forest near Dambulla, a royalty of 44 cents a sleeper being paid to Government, Rs. 4 a sleeper being the price received by the contractor. The sleepers were sent direct from the forest to Mátalé, and as no means were taken to season them, it appears there is no reason for supposing that palé sleepers cut elsewhere will not turn out equally well. Messrs. Mackenzie, Lyall & Co., of Calcutta, inform me that if palé sleepers could be landed there at Rs. 5 each, some business might be done.

* This is not satinwood, but one of the trees growing in the hill forest.

458. *A large experiment with palé sleepers recommended.*—If palé sleepers cannot be used, all hope of using indigenous timber must be given up for sixty to eighty years, until we can grow either teak, milla or satinwood in sufficient quantities. Whether they are suitable can only be decided by an exhaustive experiment, and this I would suggest being carried out at once. To be conclusive, a certain number of sleepers—not less than 4,000—must be taken, not of picked wood, but such as would be usually supplied, and a certain length of line, convenient of access, laid with them and periodically inspected. It is necessary that the experiment should cover the different climates through which the railway runs. On the Nánu-oya extension a short distance might be laid, and all renewals on part of the main line in the low country and on the Kadugannáwa incline for one year might be made with palé sleepers only. The places where the sleepers are put should be carefully recorded. The durability of the wood will then soon be decided by the sleepers on the Mátalé line and by these experiments.

459. *Sawing machinery required.*—Should it be decided to employ palé sleepers largely, the purchase of sawing machinery will be necessary. Hand-sawing is very expensive, and the districts where the palé grows being little inhabited, all labour has to be imported. Sawing by hand costs Rs. 1 to Rs. 1·50 a sleeper (the latter sum was paid for sawing those on the Mátalé line, besides supplying tools, &c.), and owing to the great difficulty of inducing people to go into the dry zone forests, the supply of even 5,000 hand-sawn sleepers a year would be precarious. When hand-sawing is used the payment should not be by the sleeper, but by measurement, care being taken to prevent waste in cutting up the logs.

The saw-bench will usually be put up in some central place in the forest to be worked, and logs from two or three miles round would be carted to it. If put up at the shipping port the transport of wood from the forest would add very largely to the expense. The machinery must be semi-portable, as every three months or so it will be moved, and gradually all the forests in the Island will be worked through. On the other hand, a light circular saw such as is used for cutting up the soft woods of the moist zone will be quite unfit to grapple with heavy palé logs. Machinery of the sort required will cost about £3,000 with a portable engine.

460. The saw-bench will also be of great use in cutting up the softer woods in the same forests from which the palé is cut.

461. *The cutting of milla sleepers to be stopped.*—Ná and milla sleepers during the past year have been supplied by the Fuel Superintendent, and orders have recently been issued by Government to the Government Agent, Western Province, to supply milla sleepers. The work is carried out without proper supervision: the contractors are allowed to select their own trees, to cut them up as they like, &c. I would strongly recommend work being stopped until it can be properly supervised, especially as the existing arrangements are by no means to the satisfaction of the railway authorities. When sleepers are rejected, the loss falls ultimately on Government, for the contractor, when working uncontrolled in the forest, thinks nothing of wasting half the timber he fells to save himself. In any case the supply of milla timber is not more than sufficient to keep pace with the ordinary market requirements, and it is far too valuable a wood to use as sleepers. Trees of large girth are now very rare, and the waste in cutting up small trees into sleepers is immense. The supply of ná sleepers will in any case be small. With so much sapwood in ná trees it appears a wasteful way of utilizing the timber, even if its durability is established.

462. *Seasoning palé timber.*—Attention must be paid to the best way of treating the palé sleepers. Some wood should be seasoned in log; of the sleepers, some in water, others being stacked. It will be impossible, except with waste that would be quite unjustifiable, to have the sleepers entirely free of sapwood at the corners; palé sapwood, moreover, is almost as hard as the heart.

463. *Co-operation of the railway authorities.*—The difficulties in getting sleepers sawn by hand at reasonable rates with economy of material are very great, and this must be borne in mind. In pine sleepers the creosote hides all defects, so that it looks better than a hardwood sleeper of really better wood. If 30,000 sleepers are supplied a year, the most economical way of utilizing the trees we cut must be adopted, although every endeavour must be made to supply good wood. Experiments should be made with fair average samples. When we have found out how to treat the wood, and the sawing, &c., is properly organized, the quality may no doubt be gradually improved, but it is hoped that the work will not suffer at first by the railway authorities requiring too high a class of sleeper. Neither the prices fixed nor the supply of timber will admit of only a few picked sleepers being taken from each log. The wood of each tree must be fairly worked up or the supply of palé, too, will run short.

464. *Cost of palé sleepers.*—The price of the palé sleepers will probably be rather higher than that of the creosoted pine. The dimensions of the sleepers are 10′ × 9″ × 5″ = 3⅓ cubic feet. For the sawn cubic foot of timber a royalty of 50 cents,* or Rs. 1·50 per sleeper should be credited to forest revenue as the price of the timber and the cost of supervision. The cost of conversion within six miles of Puttalam will be:—

	Rs.	cts.
Felling and carriage six miles to the seaboard	0	75
Sawing at Rs. 10 per 100 superficial feet	1	12
Carriage, Puttalam to Colombo, at 20 cents per cubic foot ...	0	60
Tools and contingencies	0	3
Royalty	1	50
Total ... Rs.	4	0

* This is of course considerably less than the timber realized in logs.

With machinery the cost of sawing will probably be less—probably not more than one rupee; but transport will cost more when we have to work in more distant parts of the Island, and the cost is never likely to sink below Rs. 4, of which, of course, Rs. 2·50 only is an actual disbursement; Rs. 1·50 will be the royalty or the price of the timber and the cost of the Forester's superintendence.

465. *Comparative cost of creosoted and palé sleepers.*—Compared with the cost now of creosoted sleepers, *supposing the two to be of equal durability*, the saving in favour of the hard-wood is 75 cents. The cost of superintendence of an experimental supply of 5,000 sleepers would be nominal; but in cutting 20,000 sleepers a year, superintendence and establishment would amount to about 37½ cents a sleeper, which would then have to be added to the cost. The difference in cost price between the two kinds will for some years, and indeed as long as the supply of palé for sale in the open market is not endangered, represent a direct gain to Government.

At the present stage, if the management of the palé forests is properly taken in hand there is no reason why this should not continue and the supply of timber be always ample both for the ordinary market and the supply of sleepers. If this is not done sleepers after a certain number of years will only be supplied—as would be the case now with satinwood and milla—at the cost of cutting off the ordinary market supplies, meaning, in addition to other inconveniences to the public, a considerable loss of revenue to the Colony.

F. D'A. VINCENT.

APPENDIX.

Appendix A.

EXPORTS OF FOREST PRODUCE FROM CROWN LAND.

I. (A.)—COMPARATIVE STATEMENT of the Quantity and Value of Timber exported—1862 to 1881.

Years.	Ebony.		Satinwood.		Halmilla.		Ironwood.		Woods of Sorts.		Total Value.
	Total quantity.	Declared value.	Total quantity.	Declared value.	Total quantity.	Declared value.	Total quantity.	Declared value.	Total quantity.	Declared value.	
	Cwts.	Rs.		Rs.	Logs.	Rs.	Logs.	Rs.		Rs.	Rs.
1862-66	123,986	316,152	logs 12,095 pieces 2,790 cwts. 2,735	76,024	18,919	65,339	51,400	169,407	logs 10 pieces 1,991,328 bundles 3,843	247,734	874,656
1867-71	67,068	189,749	logs 16,893 cwts. 10,641	151,677	7,204	73,003	34,237	287,402	logs 71 pieces 2,247,334 bundles 878	159,201	861,032
1872-76	108,830	524,139	logs 5,452 cwts. 31	52,793	9,426	124,803	12,262	137,935	logs 4,583 pieces 1,693,774 bundles 3,941	181,684	1,021,354
1877-81	150,566	1,036,442	logs 10,658 cwts. 250	117,167	5,206	55,243	12,532	128,758	logs 15,326 pieces 1,046,642 bundles 1,391 cwts. 6,562	254,725	1,592,335
	450,450	2,066,482	logs 45,098 cwts. 13,657 pieces 2,790	397,661	40,755	318,388	110,431	723,502	logs 19,990 pieces 6,979,078 bundles 10,053 cwts. 6,562	843,344	4,349,377

N.B.—Export duty on Timber, 2½ per cent. *ad valorem*, removed in 1870.

I. (B).—COMPARATIVE STATEMENT of the Quantity and Value of Miscellaneous Produce exported—1862 to 1881.

Years.	Firewood.		Charcoal.		Orchilla Weed.		Punai Nuts.		Tanning Bark.		Total Value.
	Quantity.	Declared value.	Quantity.	Declared value.	Quantity.	Declared value.	Quantity.	Declared value.	Quantity.	Declared value.	
	Pieces.	Rs.		Rs.	cwts.	Rs.		Rs.		Rs.	Rs.
1862-66 ...	4,443,248	42,288	cwts. 36	9	880	11,147	bags 26	80	pkgs. 3,061 cwts. 1,025	3,303	56,827
1867-71	Export stopped in 1864	—	cwts. 125	90	2,278	50,539	cwts. 36	100	pkgs. 1,874 cwts. 1,465	3,330	54,059
1872-76 ...	Do.	—	cwts. 930	1,057	1,456	23,549	bags 598	2,520	pkgs. 3,060 cwts. 726	4,213	31,339
1877-81 ...	Do.	—	bshls. 750 cwts. 1,820	1,887	3,152	47,373	bags 4,964 cwts. 218	19,171	pkgs. 960 cwts. 2,804	7,443	75,874
	pieces 4,443,248	42,288	cwts. 2,911 bshls. 750	3,043	7,766	132,608	bags 5,588 cwts. 254	21,871	pkgs. 8,955 cwts. 6,020	18,289	218,099

II.—RETURN of Timber exported during the six years ending 1881.

Years.	Ebony.		Halmilla.		Satinwood.		Ironwood.		Woods of Sorts.		Total Value.
	Quantity.	Declared value.	Quantity.	Declared value.	Quantity.	Declared value.	Quantity.	Declared value.	Quantity.	Declared value.	
	cwts.	Rs.	Logs.	Rs.	Logs.	Rs.	Logs.	Rs.	Logs.	Rs.	Rs.
1876 ...	3,555	27,069	1,164	6,153	846	3,508	884	9,236	—	40,055	
1877 ...	24,998	200,963	1,247	1,711	1,812	15,264	1,039	7,196	—	62,387	
1878 ...	19,224	161,554	1,011	11,656	1,724	15,739	925	8,091	—	26,445	
	47,777	389,586	3,422	19,520	4,382	34,511	2,848	24,523	—	128,887	3 years, 1876-78, Rs. 597,027.
Average annual export ...	15,925	129,862	1,140	6,506	1,460	11,503	949	8,174	—	42,962	Annual average, Rs. 199,009.
1879 ...	29,370	199,673	716	5,361	2,572	27,935	1,838	25,006	—	30,202	
1880 ...	52,390	338,743	1,241	21,112	1,785	25,514	2,855	29,808	—	56,946	
1881 ...	24,584	135,509	991	15,403	2,495	26,116	5,875	58,657	—	78,745	
	106,344	673,925	2,948	41,876	6,852	79,565	10,568	113,471	—	165,893	3 years, 1879-81, Rs. 1,074,730.
Average annual export ...	35,448	224,641	982	13,958	2,284	26,521	3,522	37,823	—	55,297	Annual average, Rs. 358,243.

III.—Comparative Statement of the Quantity and Value of Ebony and Satinwood exported, and the Countries to which shipped—1862 to 1881.

Year.	Ebony.								Satinwood.					
	China.		India, probably for transhipment to China.		Europe and U. S. America.		Total.		India.		Other Countries.		Total.	
	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.	Cwts.	Rs.	Logs.	Rs.	Logs.	Rs.	Logs.	Rs.
1862	—	—	1,054	5,827	9,921	23,519	10,975	29,346	4,525	17,314	—	—	4,525	17,314
1863	—	—	2,887	10,058	11,039	26,133	13,926	36,191	—	8,840	—	—	—	8,840
1864	—	—	—	6,789	9,264	21,119	9,264	27,908	2,850	10,830	11	440	2,861	11,270
1865	16,119	33,855	15,362	43,506	14,455	35,257	45,936	112,618	2,296	17,727	—	—	2,296	17,727
1866	7,803	17,725	8,966	28,057	27,116	64,307	43,885	110,089	2,413	15,973	—	4,900	2,413	20,873
Total for 5 years...	23,922	51,580	28,269	94,237	71,795	170,335	123,986	316,152	12,084	70,684	11	5,340	12,095	76,024
1867	—	—	7,009	15,220	4,495	10,568	11,504	25,788	5,096	38,556	—	23,130	5,096	61,686
1868	12,651	37,300	10	37	9,550	23,795	22,211	61,132	4,408	29,390	1	15	4,409	29,405
1869	3,666	9,710	—	5	8,195	32,970	11,861	42,685	1,703	12,313	1	40	1,704	12,353
1870	—	600	—	—	15,741	39,979	15,741	40,579	2,353	22,655	—	—	2,353	22,655
1871	41	164	752	3,606	4,958	15,795	5,751	19,565	3,331	25,578	—	—	3,331	25,578
Total for 5 years...	16,358	47,774	7,771	18,868	42,939	123,107	67,068	189,749	16,891	128,492	2	23,185	16,893	151,677
1872	8,124	41,244	800	4,453	15,373	75,736	24,297	121,433	1,503	12,425	2	80	1,505	12,505
1873	19,137	92,162	1,100	6,389	15,986	66,177	36,223	164,728	1,114	12,574	—	85	1,114	12,659
1874	9,127	45,238	—	627	19,851	85,558	28,978	131,423	822	10,918	—	40	822	10,958
1875	9,739	54,425	175	1,089	5,863	23,972	15,777	79,486	1,164	13,063	—	—	1,164	13,063
1876	1,514	11,407	—	504	2,041	15,158	3,555	27,069	846	3,508	1	100	847	3,608
Total for 5 years...	47,641	244,476	2,075	13,062	59,114	266,601	108,830	524,139	5,449	52,488	3	305	5,452	52,793
1877	19,977	158,032	376	2,761	4,645	39,570	24,998	200,963	1,812	15,264	—	—	1,812	15,264
1878	13,565	105,886	1,535	15,426	4,124	40,242	19,224	161,554	1,724	15,739	—	—	1,724	15,739
1879	21,282	121,351	2,661	28,386	5,427	49,936	29,370	199,673	2,572	27,935	4	10	2,576	27,945
1880	22,554	175,223	1,768	8,780	28,068	154,740	52,390	338,743	1,785	25,514	137	2,909	1,922	28,243
1881	19,046	110,437	—	85	5,538	24,987	24,584	135,509	2,495	26,116	129	3,680	2,624	29,796
Total for 5 years...	96,424	671,529	6,340	55,438	47,802	309,475	150,566	1,036,442	10,388	110,568	270	6,599	10,658	117,167

IV.—Annual Declared Value of Exports from Crown Lands—1862 to 1881.

Year.	Ebony.	Satinwood.	Halmilla.	Ironwood.	Woods of sorts.	Firewood.	Charcoal.	Orchilla weed.	Punai nuts.	Tanning Bark.	Annual declared value.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862	29,346	17,314	12,957	22,380	142,460	13,089	—	1,980	—	580	240,106
1863	36,191	8,840	21,079	24,087	27,286	14,190	9	3,210	—	350	135,242
1864	27,908	11,270	847	33,868	23,618	15,009	—	3,134	—	280	115,934
1865	112,618	17,727	13,738	38,945	26,120	—*	—	1,238	—	1,143	211,529
1866	110,089	20,873	16,718	50,127	28,250	—	—	1,585	80	950	228,672
1867	25,788	61,686	20,817	40,420	23,120	—	—	1,250	—	340	173,421
1868	61,132	29,405	15,868	59,864	34,099	—	90	2,115	—	1,000	203,573
1869	42,685	12,353	12,488	49,939	38,048	—	—	6,644	—	340	163,497
1870†	40,579	22,655	3,430	83,005	29,687	—	—	30,330	—	940	210,626
1871	19,565	25,578	20,400	54,174	33,247	—	—	10,200	100	710	163,974
1872	121,433	12,505	15,208	23,637	25,876	—	—	6,918	875	842	207,294
1873	164,728	12,659	34,837	55,290	39,750	—	—	3,415	132	382	311,193
1874	131,423	10,958	34,290	19,136	42,332	—	200	1,375	325	962	241,001
1875	79,486	13,063	34,315	30,636	33,671	—	857	3,231	490	868	196,617
1876	27,069	3,608	6,153	9,236	40,055	—	—	8,610	698	1,159	96,588
1877	200,963	15,264	1,711	7,196	62,387	—	1,567	9,840	1,578	755	301,261
1878	161,554	15,739	11,656	8,091	26,445	—	275	5,905	8,160	546	238,371
1879	199,673	27,945	5,361	25,006	30,202	—	45	8,056	1,364	1,563	299,215
1880	338,743	28,423	21,112	29,808	56,946	—	—	7,558	3,991	816	487,397
1881	135,509	29,796	15,403	58,657	78,745	—	—	16,014	4,078	3,763	341,965
Total of 20 years	2,066,482	397,661	318,388	723,502	843,344	42,288	3,043	132,608	21,871	18,289	4,567,476

* Export of Firewood from Crown lands stopped in 1864.
† Two and a-half per cent. *ad valorem* Export Duty on timber removed in this year.

EXPORT OF FOREST PRODUCTS CHIEFLY GROWN ON PRIVATE LANDS.

V.—Comparative Statement of the Quantity and Value—1862 to 1881.

Year.	Kitool Fibre.		Sapanwood.		Palmyrah Laths and Rafters.		Arecanut Rafters, &c.		Cocoanut Rafters, &c.		Firewood.		Total Value.
	Total quantity.	Declared value.	Total quantity.	Declared value.	Total quantity.	Declared value.	Total quantity.	Declared value.	Total quantity.	Declared value.	Total quantity.	Declared value.	
	Cwts.	Rs.	Cwts.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	Pieces.	Rs.	Rs.
1862-66	2,562	64,040	10,538	36,626	1,489,868*	324,741	—	—	—	—	—	—	425,407
1867-71	4,574	100,835	38,993	117,900	3,089,804	460,096	—	—	—	—	—	—	678,831
1872-76	6,330	173,710	34,131	140,805	2,116,342	434,625	—	—	37,346	4,109	1,014,130	10,390	763,639
1877-81	6,060	208,118	49,214	236,556	1,618,478	320,667	12,254	407	126,161	15,055	550,649	12,699	793,502
	19,526	546,703	132,876	531,887	8,314,492	1,540,129	12,254	407	163,507	19,164	1,564,779	23,089	2,661,379

* The Exports of 1862 are not given in the Returns. No Export Duty has been levied on Palmyrah Timber since 1848.

VI.—Annual Declared Value of Exports—1862 to 1881.

Year.	Kittool Fibre.	Sapanwood.	Palmyrah, Laths and Rafters.	Arecanut Rafters, &c.	Cocoanut Rafters, &c.	Firewood.	Total Annual Declared Value.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1862 ...	6,940	2,060	—	—	—	—	9,000
1863 ...	3,920	940	82,290	—	—	—	87,150
1864 ...	19,300	6,697	73,300	—	—	—	99,297
1865 ...	21,700	3,429	82,626	—	—	—	107,755
1866 ...	12,180	23,500	86,525	—	—	—	122,205
1867 ...	4,040	28,380	102,910	—	—	—	135,330
1868 ...	50,260	46,270	107,144	—	—	—	203,674
1869 ...	27,400	28,000	94,703	—	—	—	150,103
1870 ...	5,335	6,180	79,670	—	—	—	91,185
1871 ...	13,800	9,070	75,669	—	—	—	98,539
1872 ...	34,143	24,121	64,642	—	26	—	122,932
1873 ...	77,766	16,748	88,700	—	7	—	183,221
1874 ...	31,269	32,617	107,374	—	167	4,095	175,522
1875 ...	15,110	36,011	107,122	—	3,696	1,679	163,618
1876 ...	15,422	31,308	66,787	—	213	4,616	118,346
1877 ...	47,260	6,040	63,623	—	3,173	3,262	123,358
1878 ...	42,644	11,398	71,937	—	2,696	7,169	135,844
1879 ...	42,862	54,968	62,412	—	2,148	978	163,368
1880 ...	53,713	69,381	57,050	270	1,840	445	182,699
1881 ...	21,639	94,769	65,645	137	5,198	845	188,233
Total of 20 years...	546,703	531,887	1,540,129	407	19,164	23,089	2,661,379

VII.—Statement of Imports of Ceylon Timber into the Madras Presidency—1877-78 to 1881-82.

[Compiled from Returns obtained from the Collector of Customs, Madras, and others.]

Name of Port.	District.	1877-78.		1878-79.		1879-80.		1880-1881.		1881-82.	
		Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
			Rs.		Rs.		Rs.		Rs.		Rs.
Madras	Madras ...	945	—	459	—	127	—	57	—	—	—
Pondicherry ...	—	77	11,384	338	19,932	863	23,476	392	13,448	1,319	35,352
Cuddalore ...	South Arcot ...	—	19,279	—	18,375	—	14,781	—	24,414	50	23,016
Porto Novo ...	South Arcot ...	24	25,068	101	28,358	41	20,844	209	32,134	329	30,326
Tanjore Ports ...	—	3785	243,977	3,508	488,229	3,216	124,831	3,463	133,348	3,090	159,656
Tondi ...	Madura ...	—	—	—	—	—	—	2,574	74,875	—	—
Devipatam ...	Madura ...	—	3,994	—	—	—	—	—	—	—	—
Kilakari ...	Madura ...	—	—	269	8,322	222	6,398	451	13,296	278	7,015
Tuticorin	Tinnevelly ...	800	8,090	203	3,833	259	2,858	255	2,222	572	4,809
Approximate annual value ...		...	311,792	...	567,049	...	193,188	...	293,737	..	260,174

Average Annual Value of Ceylon timber imported.

Pondicherry	20,718
Cuddalore	19,973
Porto Novo	27,343
Tanjore Ports	230,008
Kilakari	8,757
Tuticorin	4,362
Total .. Rs.	311,164

THE BURMA FOREST ACT.

No. XIX. OF 1881.

PASSED BY THE GOVERNOR-GENERAL OF INDIA IN COUNCIL.

(Received the assent of the Governor-General on the 31st August, 1881.)

An Act to amend the law relating to forests, forest-produce, and the duty leviable on timber in British Burma.

Preamble.

WHEREAS it is expedient to amend the law relating to forests, forest-produce, and the duty leviable on timber in British Burma; It is hereby enacted as follows:—

CHAPTER I.

PRELIMINARY.

Short title.

1. This Act may be called "The Burma Forest Act, 1881":

Local extent.

It extends to all the territories for the time being administered by the Chief Commissioner of British Burma, provided that the chief commissioner may, by notification in the official Gazette, exempt any place from its operation; but not so as to affect anything done, or any offence committed, or any fine or penalty incurred, or any proceedings commenced in such place before such exemption; and

Commencement.

it shall come into force on such day as the Chief Commissioner may, by notification in the official Gazette, direct.

Repeal of enactments.

2. On and from such day the enactments and rules mentioned in the schedule hereto annexed shall be repealed to the extent mentioned in the third column of the same schedule.

Interpretation-clause.

3. In this Act, and in all rules made hereunder, unless there is something repugnant in the subject or context,—

"forest-officer:"

"Forest-officer" means all persons appointed by name or as holding an office by or under the orders of the Governor-General in Council or the Chief Commissioner to be—

Conservators, deputy conservators, assistant conservators, sub-assistant conservators, forest rangers, foresters, or forest-guards, or to discharge any function of a forest-officer under this Act or any rule made hereunder:

"tree:"

"tree" includes also bamboos, stumps and brushwood:

"timber:"

"timber" includes trees when they have fallen or have been felled, and all wood, whether cut up or fashioned or hollowed out for any purpose or not:

"forest produce:"

"forest-produce" includes the following things when found in, or brought from, a forest (that is to say):—

minerals (including limestone and laterite), surface-soil, trees, timber, plants, grass, peat, canes, creepers, reeds, leaves, moss, flowers, fruits, seeds, roots, juice, catechu, bark, caoutchouc, gum, wood-oil, resin, varnish, lac, charcoal, honey and wax;

"forest offence:"

"forest-offence" means an offence punishable under this Act or any rule made hereunder:

"cattle:"

"cattle" includes also elephants, buffaloes, horses, mares, geldings, ponies, colts, fillies, mules, asses, pigs, rams, ewes, sheep, lambs, goats and kids:

"river:"

"river" includes also streams, canals, creeks and other channels, natural or artificial:

"land at the disposal of Government:"

"land at the disposal of Government" means

(*a*) land in respect of which no person has acquired the status of a land-holder under section seven of the Burma Land and Revenue Act, 1876,

(*b*) land in respect of which no person has acquired any right created by grant or lease made by, or on behalf of, the British Government:

"Magistrate."

"Magistrate" means a magistrate of the first or second class and includes a magistrate of the third class when he is specially empowered by the Chief Commissioner to try forest-offences.

Saving of rights of profit from the Burma Land and Revenue Act, 1876.

4. Nothing in the Burma Land and Revenue Act, 1876, shall be deemed to affect or ever to have affected any right by which one person is entitled to remove and appropriate, for his own profit, any part of the soil belonging to another person or to the Government, or anything growing in, or attached to, or subsisting upon, the land of another person or of the Government.

CHAPTER II.

OF RESERVED FORESTS.

Power to reserve forests.

5. The Chief Commissioner may constitute any land at the disposal of Government, a reserved forest in manner hereinafter provided.

Notification by chief commissioner.

6. Whenever it is proposed to constitute any land a reserved forest, the Chief Commissioner shall publish a notification in the official Gazette—

(*a*) specifying as nearly as possible the situation and limits of such land;

(*b*) declaring that it is proposed to constitute such land a reserved forest;

(*c*) appointing an officer (hereinafter called "the forest-settlement-officer") to inquire into and determine the existence, nature and extent of any rights claimed by, or alleged to exist in favour of, any person in or over any land comprised within such limits, and any claims relating to the practice within such limits of toungya cultivation, and to deal with the same as provided in this chapter.

The officer appointed under clause (*c*) of this section shall ordinarily be a person other than a forest-officer; but a forest-officer may be appointed by the Chief Commissioner to assist the forest-settlement-officer in the inquiry prescribed by this chapter.

7. When a notification has been published under section six, the forest-settlement-officer shall publish in the language of the country, at the head-quarters of each township in which any portion of the land comprised in such notification is situate, and in every town and village in the neighbourhood of such land, a proclamation— Proclamation by forest-settlement-officer.

(*a*) specifying as nearly as possible the situation and limits of the proposed forest ;

(*b*) setting forth the substance of the provisions of section eight ;

(*c*) explaining the consequences which, as hereinafter provided, will ensue on the reservation of such forest ; and

(*d*) fixing a period of not less than three months from the date of publishing such proclamation, and requiring every person claiming any right or making any claim referred to or mentioned in section six either to present to such officer within such period a written notice specifying, or to appear before him within such period and state, the nature of such right or claim.

8. During the interval between the publication of such proclamation and the date fixed by the notification declaring the forest to be reserved as hereinafter provided, no right shall be acquired in or over the land comprised in such notification, except by succession or under a grant or contract in writing made or entered into by, or on behalf of, the Government or some person in whom such right, or power to create the same, was vested when the proclamation was published ; and, on such land, no new house shall be built or plantation formed, no fresh clearings for cultivation or for any other purpose shall be made, and no trees shall be cut for the purpose of trade or manufacture, except as hereinafter provided. Bar of accrual of forest-rights. Prohibition of building, clearing, &c.

Nothing in this section shall be deemed to prohibit any act done with the permission in writing of the forest-settlement-officer, or any clearings lawfully made for toungya cultivation by persons in the habit of practising such cultivation on such land.

9. The forest-settlement-officer shall take down in writing all statements made under section seven, and shall inquire into all claims made under that section, and the existence of any right or practice mentioned in section six in respect of which no claim is made. The forest-settlement-officer shall at the same time consider and record any objection which the forest-officer (if any), appointed under section six to assist him, may make to any such claim or to the existence of any such right or practice. Inquiry by forest-settlement officer.

10. For the purposes of such inquiry, the forest-settlement-officer may exercise the following powers (that is to say):— Powers of forest-settlement officer.

(*a*) the powers of a demarcation-officer under the Burma Boundaries Act, 1880 ; and

(*b*) the powers conferred on a civil court by the Code of Civil Procedure for compelling the attendance of witnesses and the production of documents.

11. In the case of a claim relating to the practice of toungya cultivation, the forest-settlement-officer shall pass an order specifying the particulars of such claim and permitting, or refusing to permit, such practice wholly or in part. Claims relating to practice of toungya cultivation how dealt with.

If such practice is permitted wholly or in part, the forest-settlement-officer may—

(*a*) alter the limits of the proposed reserved forest so as to exclude land of sufficient extent, of a suitable kind, and in a locality reasonably convenient for the purposes of the claimants ; or

(*b*) cause certain portions of the reserved forest to be separately demarcated, and give permission to the claimants to practice toungya cultivation under such rules and conditions as he may prescribe.

No right to practise toungya cultivation shall be deemed to be conferred by an order under this section permitting such practice, and, except with the sanction of the Chief Commissioner, such cultivation shall only be practised by the person to whom such permission is granted.

12. In the case of a claim to a right in or over any land other than the following rights :— Power to acquire land over which right is claimed.

(*a*) a right of way,

(*b*) a right to a water-course, and to use of water,

(*c*) a right of pasture, or to forest-produce,

the forest-settlement-officer shall pass an order specifying the particulars of such claim and admitting or rejecting the same wholly or in part.

If such claim is admitted wholly or in part, the forest-settlement-officer may (1) come to an agreement with the claimant for the surrender of the right ; or (2) exclude the land from the limits of the proposed forest ; or (3) proceed to acquire such land in the manner provided by the Land Acquisition Act, 1870.

For the purpose of so acquiring such land—

(i) the forest-settlement-officer shall be deemed to be a collector proceeding under the Land Acquisition Act, 1870 ;

(ii) the claimant shall be deemed to be a person interested and appearing before him in pursuance of a notice given under section nine of that Act ;

(iii) the provisions of the preceding sections of that Act shall be deemed to have been complied with ; and

(iv) the collector, with the consent of the claimant, or the court, with the consent of both parties, may award compensation in land, or partly in land and partly in money.

13. In the case of a claim to rights of the kind specified in clauses (*a*), (*b*) and (*c*) of section twelve, the forest-settlement-officer shall pass an order specifying the particulars of such claim and admitting or rejecting the same wholly or in part. Order on claims to rights of way, water-course, pasture, and to forest-produce.

When a claim to any such right is admitted, if the right is for the beneficial enjoyment of any land or buildings, he shall record the designation, position and area of such land, and the designation and position of such buildings.

Where the right is a right to forest-produce, he shall also record whether the forest produce obtained by the exercise of such right may be sold or bartered, and such other particulars as may be necessary in order to define the nature, incidents and extent of the right.

Provision for rights of pasture or to forest-produce admitted.

14. When the forest-settlement-officer has admitted wholly or in part, and recorded under section thirteen, a claim to a right of pasture or to forest-produce, he shall as far as possible provide for the exercise of such right—

(*a*) by altering the limits of the proposed reserved forest so as to exclude land of sufficient extent, of a suitable kind, and in a locality reasonably convenient for the purposes of the claimant;

(*b*) by recording an order continuing to the claimant a right of pasture or to forest-produce (as the case may be), subject to such rules as may be prescribed by the Chief Commissioner.

The order passed under clause (*b*) shall record, as far as practicable, the number and description of the cattle which the claimant is from time to time entitled to graze, the local limits within which, and the seasons during which, such pasture is permitted; or

the quantity of timber or other forest-produce which the claimant is authorized to take or receive, the local limits within which, the season during which, and the mode in which, the taking of such produce is permitted; and

such other particulars as may be required in order to define the extent of the right which is continued, and the mode in which it may be exercised.

Commutation of such rights.

15. Whenever any right of pasture or to forest-produce admitted under section thirteen is not provided for in one of the ways prescribed in section fourteen, the forest-settlement-officer shall, subject to such rules as the Chief Commissioner may prescribe in this behalf, commute such right by paying a sum of money in lieu thereof, or, with the consent of the claimant, by the grant of land, or in such other manner as such officer thinks fit.

For the purpose of granting land under this section, the forest-settlement-officer shall be deemed to be an Assistant Commissioner in charge of a sub-division.

Appeal from order passed under foregoing sections.

16. Any person who has made a claim under this chapter may, within three months from the date of any order passed on such claim by the forest-settlement-officer under section eleven, twelve, thirteen, fourteen or fifteen, present an appeal from such order to such officer of the revenue department, of rank not lower than that of a deputy commissioner, as the Chief Commissioner may, by notification in the official Gazette, appoint by name, or as holding an office, to hear appeals from such orders.

Appeal under section 16.

17. Every appeal under section sixteen shall be made by petition in writing, and may be delivered to the forest-settlement-officer, who shall forward it without delay to the officer competent to hear the same.

Hearing of appeals.

Every such appeal shall be heard in the manner prescribed for the time being for the hearing of appeals in matters relating to land-revenue, and the order passed thereon by such officer shall be final, except as hereinafter provided.

Notification declaring forest reserved.

18. When the following events have occurred, namely:—

(*a*) the period fixed under section seven for preferring claims has elapsed, and all claims (if any) made within such period have been disposed of by the forest-settlement-officer, and

(*b*) If such claims have been made, the period fixed by section sixteen for appealing from the orders passed on such claims has elapsed, and all appeals (if any) presented within such period have been disposed of by the appellate officer, and

(*c*) all lands (if any) to be included in the proposed forest, which the forest-settlement-officer has, under section twelve, elected to acquire under the Land Acquisition Act, 1870, have become vested in the Government under section sixteen of that Act,

the Chief Commissioner may publish a notification in the official Gazette, specifying the limits of the forest which it is intended to reserve, and declaring the same to be reserved from a date fixed by such notification.

From the date so fixed, such forest shall be deemed to be a reserved forest.

Extinction of rights not claimed.

19. Rights in respect of which no claim has been preferred under section seven, and of the existence of which no knowledge has been acquired by enquiry under section nine, shall thereupon be extinguished, unless, before the publication of such notification, the person claiming them has satisfied the forest-settlement-officer that he had sufficient cause for not preferring such claim within the period fixed under section seven.

Publication of translation of such notification in neighbourhood of forest.

20. The Deputy Commissioner of the district in which the forest is situate shall, before the date fixed by such notification, cause a translation thereof in the language of the country to be published in the manner prescribed for the proclamation under section seven.

Power to revise arrangement made under section 11, 14 or 17.

21. The Chief Commissioner may, within five years from the publication of any notification under section eighteen, revise any arrangement made under section eleven, fourteen or seventeen, and may rescind or modify any order made under this chapter, and direct that any one of the proceedings specified in section fourteen be taken in lieu of any other of such proceedings, or that the permission granted under section eleven, or rights admitted under section thirteen, be commuted under section fifteen.

No right acquired over reserved forest except as here provided.

22. No right of any description shall be acquired in or over a reserved forest, except by succession, or under a grant or contract in writing made by, or on behalf of, the Government, or some person in whom such right, or the power to create such right, was vested when the notification under section eighteen was published.

Rights not to be alienated without sanction.

23. Notwithstanding anything herein contained, no right continued under section fourteen shall be alienated by way of grant, sale, lease, mortgage or otherwise, without

the sanction of the Chief Commissioner: provided that, when any such right is continued for the beneficial enjoyment of any land or house, it may be sold or otherwise alienated with such land or house without such sanction.

No timber or other forest-produce obtained in exercise of any right so continued shall be sold or bartered except to the extent defined by the order recorded under section fourteen.

Power to stop ways and water-courses in reserved forest.

24. Any forest officer may, from time to time, with the previous sanction of the Chief Commissioner or of any officer duly authorized in that behalf, stop any public or private way or water-course in a reserved forest: provided that for the way or water-course so stopped, another way or water-course which in the opinion of the Chief Commissioner is equally convenient, already exists, or has been provided or constructed by such forest officer.

Penalties for trespass or damage in reserved forests.

25. Any person who in a reserved forest—

(*a*) trespasses, or pastures cattle, or permits cattle to trespass,

(*b*) causes any damage by negligence in felling any tree or cutting or dragging any timber,

(*c*) strips off the bark or leaves from or otherwise damages any tree,

(*d*) in contravention of any rules made by the Chief Commissioner, hunts, shoots, fishes, poisons water, or sets traps or snares,

shall be punished with fine which may extend to fifty rupees, or when the damage resulting from his offence amounts to more than twenty-five rupees, to double the amount of such damage.

Acts prohibited in such forests.

26. Any person who—

(*a*) makes any fresh clearing prohibited by section eight, or

(*b*) sets fire to a reserved forest, or kindles any fire, or, in contravention of any rules made by the Chief Commissioner, leaves any fire burning in such manner as to endanger the same,

or who, in a reserved forest,

(*c*) kindles, keeps or carries any fire except at such seasons and in such manner as a forest-officer specially empowered in this behalf may from time to time notify,

(*d*) fells, girdles, lops, taps or burns any tree,

(*e*) quarries stone, burns lime or charcoal, or collects, subjects to any manufacturing process, or removes, any forest-produce,

(*f*) clears or breaks up any land for cultivation or any other purpose,

shall be punished with imprisonment for a term which may extend to six months, or with fine which may extend to five hundred rupees, or with both, in addition to such compensation for damage done to the forest as the convicting court may direct to be paid.

Acts excepted from prohibition contained in sections 25 and 26.

27. Nothing in section twenty-five or section twenty-six shall be deemed to prohibit (*a*) any act done in accordance with any rule made by the Chief Commissioner or with the permission in writing of a forest-officer specially empowered to grant such permission; or (*b*) any practice of toungya cultivation permitted under section eleven; or (*c*) the exercise of any right continued under section fourteen or created by grant or contract in the manner described in section twenty-two.

Penalty for offences committed by persons having rights in reserved forests.

28. Whenever fire is caused wilfully or by gross negligence in a reserved forest by any person having rights in such forest, or having permission to practise toungya cultivation therein, or by any person in his employment, or whenever any person having rights in such forest contravenes the provisions of section twenty-three, the Chief Commissioner may (notwithstanding that a penalty has been inflicted under section twenty-six in respect of such fire) direct that in such forest or any specified portion thereof the exercise of all or any of the rights of pasture or to forest-produce shall be extinguished or suspended for such period as he thinks fit, and may withdraw any permission to practise toungya cultivation in such forest or portion.

Power to declare forest no longer reserved.

29. The Chief Commissioner may, with the previous sanction of the Governor-General in Council, by notification in the local official Gazette, direct that, from a date fixed by such notification, any forest or any portion thereof reserved under this Act shall cease to be reserved.

From the date so fixed, such forest or portion shall cease to be reserved; but the rights (if any) which have been extinguished therein shall not revive in consequence of such cessation.

Forests reserved under former rules.

30. Any forest which has been declared a reserved forest under any rules in force previous to the day on which this Act comes into force shall be deemed to have been reserved hereunder;

and all questions decided, orders issued and records prepared in connection with the reservation of such forest shall be deemed to have been decided, issued and prepared hereunder, and all provisions of this Act relating to reserved forests shall apply to such forest.

CHAPTER III.

Of Village Forests.

Constitution of village-forests.

31. The Chief Commissioner may by notification in the official Gazette constitute any land at the disposal of Government a village-forest for the benefit of any village-community or group of village-communities, and may in like manner vary or cancel any such notification.

Every such notification shall specify the limits of such village-forest.

Teak trees in village forest

32. All teak trees in a village-forest shall be deemed to be the property of Government; and no person shall cut, mark, lop, girdle, or injure by fire or otherwise, any such

the property of Government.

trees without the permission in writing of a forest-officer specially empowered to grant such permission.

Power to make rules for village-forests.

33. The Chief Commissioner may make rules for regulating the management of village-forests, prescribing the conditions under which the community or group of communities for the benefit of which any such forest is constituted may be provided with timber or other forest-produce or with pasture, and their duties in respect of the protection and improvement of such forest.

The Chief Commissioner may, by such rules, declare any of the provisions of chapter II. of this Act to be applicable to village-forests.

Saving of private rights.

34. Nothing in this chapter shall be deemed to affect any existing rights of any person in or over any village-forest.

Power to inquire into and deal with such rights.

The Chief Commissioner may in any case direct that all claims to any such rights, other than the rights of the village-community or group of village communities for the benefit of which such village-forest is constituted, shall be inquired into, recorded and provided for in the manner prescribed by chapter II. of this Act.

CHAPTER IV.

Of the Protection of certain Trees and Natural Produce.

Reserved trees.

35. All teak trees standing on any land not included in a reserved or village-forest shall be deemed to be the property of Government and shall be reserved trees.

The Chief Commissioner may by notification in the official Gazette—

(*a*) declare that any other trees or any specified class of other trees standing on any land at the disposal of Government shall, from a date to be fixed by such notification, be reserved trees;

(*b*) vary or cancel any such notification;

(*c*) declare that any teak trees standing on land other than land at the disposal of Government shall, from a date to be fixed by such notification, cease to be the property of Government and to be reserved trees.

Protection of reserved trees.

36. No person shall cut, mark, lop, girdle, tap, or injure by fire or otherwise, any reserved tree, except as provided by rules made by the Chief Commissioner in this behalf, or with the permission in writing of a forest-officer specially empowered to grant such permission.

Whoever cuts, marks, lops, girdles, taps, or injures by fire or otherwise, any reserved tree in contravention of this section shall be punished with fine which may extend to twenty rupees, or when the damage resulting from his offence amounts to more than ten rupees, to double the amount of such damage.

Power to make rules generally.

37. No person shall make use of the pasturage or of the natural produce of any land at the disposal of Government and not included in a reserved or village-forest, except in accordance with rules which may be prescribed by the Chief Commissioner. Such rules may, with respect to such land,—

(*a*) regulate or prohibit the cutting of toungyas, or the issue of grants or leases by Government with respect to land on which teak trees are growing;

(*b*) regulate or prohibit the kindling of fires, and prescribe the precautions to be taken to prevent the spreading of fires;

(*c*) regulate or prohibit the cutting, sawing, conversion and removal of trees and timber, and the collection and removal of natural produce;

(*d*) regulate or prohibit the quarrying of stone, the boiling of cutch, or the burning of lime or charcoal;

(*e*) regulate or prohibit the cutting of grass and pasturing of cattle, and regulate the payments (if any) to be made for such cutting or pasturing;

(*f*) regulate or prohibit hunting, shooting, fishing, poisoning water and setting traps or snares;

(*g*) regulate the sale of free grant of timber or other natural produce; and

(*h*) prescribe, or authorize any forest-officer to prescribe, subject to the control of the Chief Commissioner, the fees, royalties or other payments for such timber or other natural produce, and the manner in which such fees, royalties or other payments shall be levied, whether in transit, or partly in transit, or otherwise.

Penalties for acts in contravention of rules.

The Chief Commissioner may, by such rules, prescribe as penalties for the infringement thereof, imprisonment for a term which may extend to six months, or fine which may extend to five hundred rupees, or both.

The Chief Commissioner may exempt any person or class of persons or any local area from the operation of any such rule, and may cancel such exemption.

Nothing in this chapter to prohibit acts done in certain cases.

38. Nothing in this chapter or in any rule made under this chapter shall be deemed to prohibit any act done with the permission in writing of a forest-officer specially empowered to grant such permission, or in the exercise of any right.

CHAPTER V.

Of the Duty on Timber.

Power to impose duty on timber.

39. The Chief Commissioner may levy a duty, in such manner, at such places, and at such rates, as he may prescribe by notification in the official Gazette, on all timber which is brought into British Burma from any place beyond the frontier of British Burma.

Power to fix value for *ad valorem* duty.

In every case in which such duty is directed to be levied *ad valorem*, the Chief Commissioner may, by like notification, fix the value on which such duty shall be assessed.

40. On all teak timber cut within the limits of the Attaran forest and floated down the Attaran river, duty shall be levied at the following rates, that is to say :— Duty on certain timber floated down the Attaran.

		Rs.	A.	P.	
On logs above five feet in girth	...	4	0	0	per log
Ditto below " "	...	2	0	0	"
On stem pieces ...	...	0	9	0	per piece
On ship crooks ...	...	0	4	0	per crook

These rates shall not apply to timber for which special rates have been fixed by any agreement entered into with Government.

41. The Chief Commissioner may exempt any timber from the duty to which it is liable under section thirty-nine or section forty, and revoke such exemption. Power to exempt timber from duty.

42. Nothing in this chapter shall be deemed to limit the amount (if any) chargeable as purchase-money or royalty on any timber. Provisions of chapter not to limit purchase-money or royalty.

CHAPTER VI.

Of the Control of Timber in Transit.

43. The control of all rivers and their banks as regards the floating of timber, as well as the control of all timber in transit by land or water, is vested in the Chief Commissioner, and he may make rules to regulate the transit of all timber. Power to make rules to regulate transit of timber.

Such rules may (among other matters)—

(*a*) prescribe the routes by which alone timber may be imported into, exported from, or removed within, British Burma ;

(*b*) prohibit the import and export or moving of such timber without a pass from an officer duly authorized to issue the same, or otherwise than in accordance with the conditions of such pass :

(*c*) provide for the issue, production and return of such passes ;

(*d*) fix, or authorize any forest-officer to fix, subject to the control of the Chief Commissioner, the fees payable for such passes ;

(*e*) in the case of timber formed into a raft or fastened to the shore, prohibit the loosening or the setting adrift of such timber by any person not the owner thereof, or not acting on behalf of such owner or of the Government ;

(*f*) provide for the stoppage, reporting, examination and marking of timber in transit in respect of which there is reason to believe that any money is payable to Government, or to which it is desirable, for the purposes of this Act, to affix a mark ;

(*g*) establish, or authorize any forest-officer to establish, subject to the control of the Chief Commissioner, stations to which such timber shall be taken by those in charge of it for examination, or for the realization of such money, or in order that such mark may be affixed to it ; and the conditions under which such timber shall be brought to, stored at, and removed from, such station ;

(*h*) provide for the management and control of such stations, and for regulating the appointment and duties of persons employed thereat ;

(*i*) authorize the transport of timber the property of Government across any land, and regulate the compensation to be paid for any damage done by the transport of such timber ;

(*j*) prohibit the closing up or obstruction of the channel or banks of any river used for the transit of timber, and the throwing of grass, brushwood, branches and leaves into any such river, or any other act which tends to cause the obstruction of such channel ;

(*k*) provide for the prevention and removal of any obstruction in the channel or on the banks of any such river, and for recovering the cost of such prevention or removal, from the person, or by the sale of any timber, causing such obstruction ;

(*l*) prohibit absolutely, or subject to conditions within specified local limits, the establishment of sawpits, the converting, cutting, burning, concealing, marking or supermarking of timber, the altering or effacing of any marks on the same, and possession or carrying of marking-hammers or other implements used for marking timber ;

(*m*) regulate the use of property-marks for timber, and the registration of such marks ; declare the circumstances in which the registration of any property-marks may be refused or cancelled ; prescribe the time for which such registration shall hold good ; limit the number of such marks that may be registered by any one person, and provide for the levy of fees for such registration.

44. The Chief Commissioner may, by such rules, prescribe, as penalties for the infringement thereof, imprisonment for a term which may extend to six months, or fine which may extend to five hundred rupees, or both. Penalties for breach of rules made under section 43.

In cases where the offence is committed after sunset and before sunrise, or after making preparation for resistance to the execution of any law or any legal process, or where the offender has been previously convicted of a like offence, the convicting magistrate may inflict double the penalty prescribed for such offence.

45. In case of any accident or emergency involving danger to any property at any such station, every person employed at such station, whether by the Government or by any private person, shall render assistance to any forest-officer or police-officer demanding his aid in averting such danger and securing such property from damage or loss. All persons bound to aid in case of accident at station.

CHAPTER VII.

Of the Collection of Drift, Stranded and other Timber.

46. All timber found adrift, beached, stranded or sunk, Certain kinds of timber to be deemed property of Government.

all timber bearing marks which have not been registered under rules made under section forty-three,

until title thereto proved.

all timber which has been supermarked, or on which the marks have been obliterated, altered or defaced by fire or otherwise, and

in such areas as the Chief Commissioner directs, all unmarked timber,

shall be deemed to be the property of Government unless and until any person establishes his right thereto as provided in this chapter.

Power to collect the same.

Such timber may be collected by any forest-officer or other person entitled to collect the same, and may be brought to such stations as a forest-officer specially empowered in this behalf may from time to time notify as stations for the reception of drift-timber.

The Chief Commissioner may, by notification in the official Gazette, exempt any class of timber from the provisions of this section, and withdraw such exemption.

Notice to claimants of drift-timber.

47. Public notice shall from time to time, as occasion may require, be given by a forest-officer specially empowered in this behalf of timber collected under section forty-six. Such notice shall contain a description of the timber, and shall require any person claiming the same to present to such officer, within a period not less than one month from the date on which such notice is given, a written statement of such claim.

Procedure on claim preferred to such timber.

48. When any such statement is presented as aforesaid, the forest-officer may, after making such inquiry as he thinks fit, either reject the claim after recording his reasons for so doing, or deliver the timber to the claimant.

If such timber is claimed by more than one person, the forest-officer may either deliver the same to any of such persons whom he deems entitled thereto, or may refer the claimants to the civil court and retain the timber pending the receipt of an order from such court for its disposal.

On rejection of claim to such timber, claimant may institute suit.

Any person whose claim has been rejected under this section may, within two months from the date of such rejection, institute a suit to recover possession of the timber claimed by him; but no person shall recover any compensation against the Government or against any forest-officer on account of such rejection, or the detention or removal of any timber, or the delivery thereof to any other person under this section.

No such timber shall be subject to process of any civil court until it has been delivered, or a suit brought under this section has been decided.

Disposal of unclaimed timber.

49. If no statement is presented in the manner and within the period prescribed by the notice issued under section forty-seven, or, where such statement having been so presented, and, the claim having been rejected, the claimant omits to institute a suit to recover possession of such timber within the further period mentioned in section forty-eight, the ownership of such timber shall vest in the Government free from all incumbrances; or, when such timber has been delivered to another person under section forty-eight, in such other person, free from all incumbrances not created by him.

Payments to be made by claimant before timber is delivered to him.

50. No person shall be entitled to recover possession of any timber collected or delivered as aforesaid until he has paid to the forest-officer, or other person entitled to receive it, such sum on account thereof as may be due for salving, collecting, moving, storing and disposing of the same.

Power to make rules and prescribe penalties.

51. The Chief Commissioner may make rules to regulate the following matters (namely):—

(*a*) the salving, collection and disposal of all timber mentioned in section forty-six;

(*b*) the use and registration of boats used in salving and collecting timber;

(*c*) the amount to be paid for salving, collecting, moving, storing and disposing of such timber; and

(*d*) the use and registration of hammers and other instruments to be used for marking such timber.

The Chief Commissioner may, by such rules, prescribe, as penalties for the infringement thereof, imprisonment for a term which may extend to six months, or fine which may extend to five hundred rupees, or both.

CHAPTER VIII.

PENALTIES AND PROCEDURE.

Seizure of property liable to confiscation.

52. When there is reason to believe that a forest-offence has been committed in respect of any timber or forest-produce, such timber or produce, together with all tools, boats, carts and cattle used in committing any such offence, may be seized by any forest-officer or police-officer.

Report to magistrate.

Every officer seizing any property under this section shall place on such property, or the receptacle (if any) in which it is contained, a mark indicating that the same has been so seized, and shall, as soon as may be, make a report of such seizure to the magistrate having jurisdiction to try the offence on account of which the seizure has been made:

Provided that when the timber or forest-produce with respect to which such offence is believed to have been committed is the property of Government and the offender is unknown, it shall be sufficient if the officer makes, as soon as may be, a report of the circumstances to his official superior.

Procedure thereupon.

53. Upon the receipt of any such report, the magistrate shall take such measures as may be necessary for the trial of the accused and the disposal of the property according to law.

Timber, forest-produce, tools, &c., when liable to confiscation.

54. When any person is convicted of a forest-offence, all timber or forest-produce in respect of which such offence has been committed, and all tools, boats, carts and cattle used in committing such offence, shall be liable, by order of the convicting magistrate, to confiscation.

Such confiscation may be in addition to any other punishment prescribed for such offence.

55. When the trial of any forest-offence is concluded, any timber or forest-produce in respect of which such offence has been committed shall, if it is the property of Government, or has been confiscated, be taken possession of by a forest-officer specially empowered in this behalf; and in any other case may be disposed of in such manner as the court may order.

Disposal, on conclusion of trial for forest offence, of produce in respect of which it was committed.

56. When the offender is not known or cannot be found, the magistrate enquiring into the offence, if he finds that an offence has been committed, may, on application in this behalf, order the property in respect of which the offence has been committed to be confiscated and taken possession of by a forest-officer specially empowered in this behalf, or to be made over to such forest-officer or other person as the magistrate considers entitled to the same:

Provided that no such order shall be made until the expiration of one month from the date of seizing such property, or without hearing the person (if any) claiming any right thereto, and the evidence (if any) which he may produce in support of his claim.

The magistrate shall either cause a notice of any application under this section to be served upon any person whom he has reason to believe is interested in the property seized, or shall publish such notice in any way which he thinks fit.

Procedure when offender not known or cannot be found.

57. The magistrate may, notwithstanding anything hereinbefore contained, direct the sale of any property seized under section fifty-two and subject to speedy and natural decay, and may deal with the proceeds as he might have dealt with such property if it had not been sold.

Procedure as to perishable property seized under section 52.

58. Any person claiming to be interested in property seized under section fifty-two may, within one month from the date of any order passed under section fifty-four, section fifty-five or section fifty-six, present an appeal therefrom to the court to which orders made by such magistrate are ordinarily appealable, and the order passed on such appeal shall be final.

Appeal from orders under sections 54, 55 and 56.

59. When an order for the confiscation of any property has been passed under section fifty-four or fifty-six, and the period limited by section fifty-eight for presenting an appeal from such order has elapsed, and no such appeal has been presented, or when, on such an appeal being presented, the appellate court confirms such order in respect of the whole or a portion of such property, such property or portion, as the case may be, shall vest in the Government free from all incumbrances.

Property when to vest in Government.

60. Nothing hereinbefore contained shall be deemed to prevent any officer empowered in this behalf by the Chief Commissioner from directing at any time the immediate release of any property seized under section fifty-two and the withdrawal of any charge made in respect of such property.

Saving of power to release property seized.

61. Any forest-officer or police-officer who vexatiously and unnecessarily seizes any property on pretence of seizing property liable to confiscation under this Act shall be punished with imprisonment for a term which may extend to six months, or with fine which may extend to five hundred rupees, or with both.

Any fine so imposed, or any portion thereof, shall, if the convicting magistrate so direct, be given as compensation to the person aggrieved by such seizure.

Punishment for wrongful seizure.

62. Whoever, with intent to cause damage or injury to the public or to any person, or to cause wrongful gain as defined in the Indian Penal Code—

(*a*) knowingly counterfeits upon any timber or standing tree a mark used by forest-officers to indicate that such timber or tree is the property of the Government or of some person, or that it may lawfully be cut or removed by some person, or

(*b*) unlawfully affixes to any timber or standing tree a mark used by forest-officers, or

(*c*) alters, defaces or obliterates any such mark placed on any timber or standing tree by or under the authority of a forest-officer, or

(*d*) alters, moves, destroys or defaces any boundary-mark of any forest or waste-land to which any provisions of this Act apply,

shall be punished with imprisonment for a term which may extend to two years, or with fine, or with both.

Penalty for counterfeiting or defacing marks in trees and timber and for altering boundary marks.

63. Any forest-officer or police-officer may, without orders from a magistrate and without a warrant, arrest any person reasonably suspected of having been concerned in any forest-offence punishable with imprisonment for one month or upwards, if such person refuses to give his name and residence, or gives a name or residence which there is reason to believe to be false, or if there is reason to believe that he will abscond.

Every officer making an arrest under this section shall, without unnecessary delay take or send the person arrested before a magistrate having jurisdiction in the case.

Power to arrest without warrant.

64. Every forest-officer and police-officer shall prevent, and may interfere for the purpose of preventing, the commission of any forest-offence.

Power to prevent commission of offence.

65. Nothing in this Act shall be deemed to prevent any person from being prosecuted under any other law for any act or omission which constitutes a forest-offence, or from being liable under such other law to any higher punishment or penalty than that provided by this Act or the rules made hereunder;

Provided that no person shall be punished twice for the same offence.

Operation of other laws not barred.

66. Any forest-officer specially empowered in this behalf may accept from any person reasonably suspected of having committed any forest-offence other than an offence under section sixty-one or section sixty-two a sum of money by way of compensation for the offence which may have been committed; and where any property has been seized as liable to confiscation, may release the same on payment of the value thereof as estimated by such officer.

On the payment of such sum of money, or such value, or both, as the case may be, to such officer, the accused person, if in custody, shall be discharged, the property seized

Power to compound offences.

shall be released, and no further proceedings shall be taken against such person or property.

Presumption that timber or forest-produce belongs to Government.

67. When in any proceedings taken under this Act, or in consequence of anything done under this Act, a question arises as to whether any timber or forest-produce is the property of the Government, such timber or produce shall be presumed to be the property of the Government until the contrary is proved.

CHAPTER IX.

CATTLE-TRESPASS.

Cattle-trespass Act, 1871, to apply.

68. Cattle trespassing in a reserved forest or in a village-forest shall be deemed to be cattle doing damage to a public plantation within the meaning of the eleventh section of the Cattle-trespass Act, 1871, and may be seized and impounded as such by any forest-officer or police-officer.

Power to alter fines fixed by that Act.

69. The Chief Commissioner may, by notification in the official Gazette, direct that, in lieu of the fines fixed by the twelfth section of the Act last aforesaid, there shall be levied for each head of cattle impounded under section sixty-eight of this Act, such fines as he thinks fit, but not exceeding the following (that is to say):

	Rs.	A.
For each elephant	10	0
For each buffalo	2	0
For each horse, mare, gelding, pony, colt, filly, mule, bull, bullock, cow or heifer	1	0
For each calf, ass, pig, ram, ewe, sheep, lamb, goat or kid ...	0	8

CHAPTER X.

OF FOREST-OFFICERS.

Chief Commissioner may invest forest-officers with certain powers.

70. The Chief Commissioner may invest any forest-officer by name, or as holding an office, with the following powers (that is to say):—

(*a*) the powers of a demarcation-officer under the Burma Boundaries Act, 1880;

(*b*) the powers of a civil court to compel the attendance of witnesses and the production of documents;

(*c*) power to issue search-warrants under the Code of Criminal Procedure;

(*d*) power to hold enquiries into forest-offences, and in the course of such enquiries to receive and record evidence;

(*e*) power to notify seasons and manner in which fire may be kindled, kept or carried in a reserved forest;

(*f*) power to grant any permission referred to in section twenty-seven, thirty-two, thirty-six or thirty-eight;

(*g*) power to notify stations for the reception of drift timber;

(*h*) power to give public notice of timber collected under section forty-six;

(*i*) power to take possession of property under this Act;

(*j*) power to direct the release of property or withdrawal of charges;

(*k*) power to accept compensation for forest-offences;

and may withdraw any powers so conferred.

Any evidence recorded under clause (*d*) of this section shall be admissible in any subsequent trial before a magistrate of the alleged offender: Provided that it has been taken in the presence of the accused person, and recorded in the manner provided by section 333, section 334 or section 335 of the Code of Criminal Procedure.

Forest officers deemed public servants.

71. All forest-officers shall be deemed to be public servants within the meaning of the Indian Penal Code.

Indemnity for acts done in good faith.

72. No suit or criminal prosecution shall lie against any public servant for anything done or omitted by him in good faith under this Act.

Forest officers not to trade.

73. Except with the permission in writing of the Chief Commissioner, no forest-officer shall, as principal or agent, trade in timber or forest-produce, or be or become interested in any lease or mortgage of any forest, or in any contract for working any forest, whether in British or foreign territory.

CHAPTER XI.

MISCELLANEOUS.

Additional powers to make rules.

74. The Chief Commissioner may make rules consistent with this Act—

(*a*) to declare by what forest-officer or class of forest-officers the powers or duties conferred or imposed by or under this Act on a forest-officer shall be exercised or performed;

(*b*) to regulate the procedure of forest-settlement-officers;

(*c*) to regulate the rewards to be paid to officers and informers from the proceeds of fines and confiscations under this Act or from the Public Treasury; and

(*d*) generally to carry out the provisions of this Act.

Rules when to have force of law. Powers of Chief Commissioner exercisable from time to time.

75. All rules made by the Chief Commissioner under this Act shall be published in the official Gazette, and shall thereupon have the force of law.

All powers conferred by this Act on the Chief Commissioner may be exercised from time to time as occasion requires.

76. Every person who exercises any right in a reserved-forest or a village-forest, or who is permitted to take any forest-produce from, or to cut and remove timber or to pasture cattle or to practise toungya cultivation in, such forest, and

every person who is employed by any such person in such forest, and

every person in any village contiguous to such forest who is employed by the Government, or who receives emoluments from the Government for services to be performed to the community,

shall be bound to furnish without unnecessary delay to the nearest forest-officer or police-officer any information he may possess respecting the occurrence of a fire in or near such forest, or the commission of, or intention to commit, any forest-offence ; and shall assist any forest-officer or police-officer demanding his aid—

(*a*) in extinguishing any fire occurring in such forest ;

(*b*) in preventing any fire which may occur in the vicinity of such forest from spreading to such forest ;

(*c*) in preventing the commission in such forest of any forest-offence ; and

(*d*) when there is reason to believe that any such offence has been committed in such forest, in discovering and arresting the offender.

Persons bound to assist forest-officer and police-officer

77. All money, other than fines, payable to the Government under this Act, or under any rule made hereunder, or on account of the price of any timber or forest-produce, or of expenses incurred in the execution of this Act in respect of such timber or forest-produce, may, if not paid when due, be recovered under the law for the time being in force as if it were an arrear of land-revenue.

Recovery of money due to Government.

78. When any such money is payable for, or in respect of, any forest-produce, the amount thereof shall be deemed to be a first charge on such produce ; and such produce may be taken possession of by a forest-officer specially empowered in this behalf, and may be retained by him until such amount has been paid.

Lien on forest-produce for such money.

If such amount is not paid when due, such forest-officer may sell such produce by public auction, and the proceeds of the sale shall be applied first in discharging such amount.

Power to sell such produce.

The surplus (if any), if not claimed within two months from the date of the sale by the person entitled thereto, shall be forfeited to Government.

79. The Government shall not be responsible for any loss or damage which may occur in respect of any timber while at a station established under a rule made under section forty-three, or while detained elsewhere for the purposes of this Act, or in respect of any timber collected under section forty-six ; and no forest-officer shall be responsible for any such loss or damage unless he causes the same negligently, maliciously or fraudulently.

Government and its officers not liable for loss or damage in respect of certain timber.

80. Whenever it appears to the Chief Commissioner that any land is required for any of the purposes of this Act, such land shall be deemed to be needed for a public purpose within the meaning of the Land Acquisition Act, 1870, section four.

Land required under this Act to be deemed to be needed for a public purpose under Land Acquisition Act.

XLIII.—1881.

THE

MÁLDIVE ISLANDS:

AN ACCOUNT OF

THE PHYSICAL FEATURES, CLIMATE, HISTORY, INHABITANTS, PRODUCTIONS, AND TRADE.

By H. C. P. BELL, Esq.,
Ceylon Civil Service.

Ordered by His Excellency the Governor to be Printed.

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1883.

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THE

MÁLDIVE ISLANDS.

INTRODUCTION.

It is attempted in the present Memoir to do some justice to a people little known and less regarded.

Probably but very few persons have more than a hazy notion that the Máldive group lies somewhere in Eastern seas, or would be able to fix its position at all approximately. The worse than ignorance occasionally displayed even by would-be instructors is astounding. As late as 1811 a standard treatise on Geography* gravely asserted that these Islands were "governed by a chief called Atoll," and were inhabited by "some Mahometans"!

The notices regarding the Máldive Islands are so few and far between, so dispersed up and down scarce works, mostly travels, difficult of reference, that it is hoped an effort to collect and bring into one focus the scattered rays of information on the subject may serve some useful purpose.

Authorities.

The whole of the authorities on the Máldives may be almost counted on the fingers. The chief are :—

1. Ibn Batúta (A.D. 1343 4).
2. François Pyrard de Laval (A.D. 1602-1607).
3. The Government Surveyors of the Indian Navy—Captain Moresby, and Lieutenants Christopher, Powell, and Young (A.D. 1834-1836).

Ibn Batúta.

1. Of Ibn Batúta's Travels an English translation was made by Dr. S. Lee in 1829, but the manuscript copies used were abridged, and the old traveller was not fairly dealt with.† Within the last ten years, however, an excellent edition in four octavo volumes of the Arabic text, with translation at foot, has been issued through the *Société Asiatique* by M. M. Defrémery and Sanguinetti.‡

François Pyrard

2. Pyrard, the French adventurer, who spent five years of captivity on the group, has left the fullest account of the Islands extant. Unfortunately, copies of his *Voyage aux Indes Orientales* are extremely rare, and portions only have been translated into English.§

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* Pinkerton's Modern Geography, Vol. I., p. 757.

† Travels of Ibn Batúta, printed for the Oriental Translation Committee, London, 1829.

‡ From this French edition Mr. Albert Gray has just completed an English translation of Ibn Batúta's visit to the Máldives and Ceylon, which will shortly be published in the Ceylon A. S. Journal. "The first detailed account of his (Ibn Batúta's) book was published in Europe only in 1808 [Kosegarten and Apetz] Moura in 1845 issued at Lisbon an incomplete translation in Portuguese of a copy obtained at Fez at the end of last century. The abridgment translated by Lee was brought from the East by Burckhardt. It was not till the French conquest of Algeria that the best and completest texts were obtained. Five are in the Imperial Library at Paris, only two of which are perfect. From these M. M. Defrémery and Sanguinetti made their translation [Paris, 1874-9] for the *Société Asiatique*; and it is from their version that the present account has been extracted."—From Mr. Gray's Introduction.

§ "This is one of the exactest pieces of Travels, and the most diverting, hitherto made publick. M. Pirard the Traveller furnished the materials, which were digested and methodized by several very able men in France. Many who have travelled after him mension much of what he does, and yet he has some curiosities which others have not touched upon." (*Journ. des Scav.*, Vol. 7, p. 85.)—Introduction to a Collection of Voyages and Travels, London, 1704, Vol. I., p. lxxxi. "His adventures, and his evident honesty in their narration, created so warm an interest in the publication of his book, that it went through no less than four editions in the 17th century," viz., 1611, 1615-6, 1619, 1679.—Gray, in J. R. A. S., Vol. X., N.S., 1878, p. 175. A translation of Pyrard has been undertaken for the Hakluyt Society.

The Colombo Museum, and Ceylon Asiatic Society's Libraries are without a copy of Pyrard's Travels —a want much to be regretted. A private copy (4th edition, 1679, 4to) came to hand only after this Report had gone to press, too late to be turned to full account.

THE MALDIVES.

INTRODUCTION.

Christopher and Young.

3. At the time of the survey of the Atols in 1834, permission was obtained from the Sultan for Lieutenants Christopher and Young to remain at Málé (Sultan's Island), in order to acquire some knowledge of the "productions and resources, the language, disposition, customs, &c., of the inhabitants." After struggling some time against the fever, which shortly attacked them, they were forced to quit. During their stay, however, they kept a journal from which a Memoir was subsequently compiled, containing such information as they were able to collect. It was published in the Bombay Geographical Society's Transactions,* and, though more than forty years have since elapsed, continues to be the most modern report in any detail of the Islands. Wanting only in systematic arrangement, it may unhesitatingly be accepted as reliable, so far as it goes, and as generally applicable to the present condition of the Máldivians.

Ceylon's Chief Dependency.

It cannot but be a matter of surprise that a political connection with the English Government in Ceylon, extending over eighty years, has tended to throw little or no light either on the internal administration of the Islands or on the habits of the people.

Whilst the Indian Government has from time to time—and of late years regularly—called for reports on the smaller and far less important Northern cluster, the Lakkadives—action which has borne fruit in the marked general improvement of those Islands, the Government of this Colony has omitted—may be from mistaken delicacy—to take more than an annual passing notice of its dependency, except upon occasions when the "enlightened humanity" of the Máldive ruler and his subjects towards persons shipwrecked on their Atols has necessitated special acknowledgment.

Several causes may have combined, in greater or less degree, to bring about this result—the isolation and insignificance of the group—the rare opportunities of contact and intercourse with the Islanders—their own timid and suspicious nature—and, perhaps above all, official uncertainty concerning the exact status of the Máldive Sultan as respects this Government.

In the interest of a race constitutionally peaceful, by no means wanting, according to their lights, in commercial activity and intelligence, nor averse to beneficial innovations, if introduced with tact and discrimination, it is not unreasonable to express the hope that this apathy on the part of the protecting Government may now at length give place to real and permanent concern for the welfare of its hitherto neglected dependency. For the Máldivians a closer connection with Ceylon is "a consummation devoutly to be wished," and, it may safely be predicted, would not be without advantage to this Colony itself.†

Contents of Memoir.

Much of the following pages, especially in Sections I., II., III., and V., has been taken of set purpose—often *verbatim*—from accounts, (wherever considered reliable,) which have already been given to the world, but methodized, corrected as far as possible where necessary, and brought up to date.

On all that concerns their character, pursuits, and life in general, a marked unanimity prevails between the few reliable biographers the Máldivians have hitherto found. This consensus naturally follows from the close conservatism these Islanders have preserved for centuries. No account, therefore, of the state of things existing at present on the Atols can lay claim to accuracy without being at the same time in great part a *réchauffé* of past observations.

The scanty sum total of knowledge on record regarding these Islands will be held sufficient excuse for the insertion of minor details, which would otherwise be out of place in an *opuscule* of this kind.

Sections IV., VII., and VIII.—viz., those on History, Trade, and Weights and Measures—will, it is believed, be found to contain considerable matter entirely new.

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* Trans. Bombay Geo. Soc., 1836 8 (reprint 1844), pp. 54-86.

† See Mr. Albert Gray's concluding remarks in his article on the Máldives (J. R. A. S., Vol. X, Art. VIII, N. S., 1878, p. 209):—"Measures should be taken by the Ceylon Government without delay to render more intimate the connection with its dependency, and overcoming the jealousy of the Maldive ruler, if any still exists, to extend to his subjects some of the benefits of Ceylon civilization."

The greater part of the early Portuguese period in the Historical section has been worked in from notes kindly furnished by Mr. Gray, whose recent interesting Article in the Royal Asiatic Society's Journal has further been freely drawn on.*

The Records (Dutch and English) of the Colonial Office, Colombo, have yielded a store of information bearing on the history of the Islands from the middle of the 17th century, cropping up where least expected, but not unearthed without some difficulty.

The accompanying Maps and Diagram have been prepared in the Surveyor-General's Office, Colombo.

Finally, it should not be forgotten that the materials available in Ceylon for the compilation of this Report have been somewhat limited, and that further investigation is more than likely to show that many statements require modification.

* Mr. Gray's MS translation of the French editors' *Voyages d' Ibn Batoutah*, received very recently, has also, by courteous permission, been occasionally utilized in revising the proof-sheets. The writer desires at the same time to express his obligation to Major A. Ewing and L. J. E G. Tate, C.C.S., for suggestions in the rendering of the old French correspondence quoted—to Messrs. W. Ferguson, F.L.S., and A. Haly, in helping to identify botanical and mollusc specimens—to A. C. Dixon, B. Sc., for an analysis of Máldive coins—and lastly to the learned scholars Subhúti Unnánsé, Dhammálóka Unnánsé, and Mudaliyár B. Guṇasékara, Government Translator, for their valuable aid in elucidating the Sanskrit portion of the Máldive Sultan's letter.

*ERRATA.**

Page 4, lines 2, 16, *for* 'Mr. Darvin' *read* 'Mr. Darwin.'
5, „ 17, 19, *for* 'isles' *read* 'des isles.'
7, note §, *insert* 'Soc.' *after* 'Trans. Bombay Geo.'
12, line 20, *for* 'breach' *read* 'beach.'
20, „ 13, *delete* '(1790?).'
25, „ 14, *for* 'Chihâb eddîn' *read* 'Chihâb eddîn.'
27, note ‡‡, *for* 'Insarte' *read* 'Jusarte.'
28, „ ‖, *for* 'Muhammadism' *read* 'Muhammadanism.'
30, „ ‖, *for* '*quemoüile*' *read* '*quenoüille*.'
31, „ †† *for* 'T. A. Rumpf' *read* 'I. A. Rumpf.'
33, „ ‡, *for* 'escades' *read* 'escadres.'
34, last line, '*' *should be* '‖.'
34, note ¶, *delete* 'Ghází.'
35, five lines from bottom, *for* 'account' *read* 'accounts.'
36, line 6, *for* 'the matter' *read* 'the dispute.'
37, last line and margin, *for* 'St. Clare' *read* 'St Clair.'
38, note ‖, *for* 'Note (15)' *read* 'Note (11).'
42, six lines from bottom, *for* 'honneurl' *read* 'lhonneur.'
four „ *for* 'Jay' *read* 'Icy.'
43, line 6, *for* 'Mattele' *read* 'Mattelo.'
53, „ 16, *for* '175' *read* '182.'
58, 60, 61, 62, 63, 64, notes, *for* 'Harris, Vol. II.' *read* 'Harris, Vol. I.'
61, line 38, *for* 'candouittes' *read* '*candou*.'
64, *for* '* Note (11),' '‡ Note (10)' *read* '* Note (10),' '‡ Note (11).'
71, line 12, *for* '[A D. 1435 *circa*] *read* '[? 600, *i. e.*, A.D. 1235 *circa*]'
78, „ 13, *for* '*Fâmeldâry*, "Receiver-General of Revenue,"' *read* '*Fâmeldâry*, "Chief of the Treasury."'
84, „ 13, *for* 'mastification' *read* 'mastication.'
85, „ 10, *for* '*Eudyamys*' *read* '*Eudynamis*.'
99, „ 33, *for* '*Achtbaar*' *read* '*Achtbaer*.'
100, „ 23, *for* '(about £14)' *read* '(about £246).'
100, „ 27, *for* '*seclusive*' *read* '*seclusie*'; *for* '*ander*' *read* '*andere*.'
104, note ×, *for* 'Princep's' *read* 'Prinsep's.'
108, lines 12, 13, *place* '*' *after* '*horses*,' *and delete* '†' *after* 'later.'
108, in Tonnage table, *insert* '§' *after* '4,145.'
118, line 16, *place* '100 = 25' *directly under* '4 = *Bodu lâri*.'
130, „ 3, *delete* '3.'
130, margin, *delete* '1842' *after* '1839.'
133, in List of Wrecks *insert* '†' *after* '1862' *and* '1868.'

* Errors in the transliteration of native words are not included.

THE

MÁLDIVE ISLANDS.

I.—PHYSICAL FEATURES.*

THE MALDIVES.

PHYSICAL FEATURES.

THE MA'LDIVE ISLANDS† extend in the Indian Ocean from lat. 7° 6′ N. to lat. 0° 42′ S., and between long. 72° 33′ and 73° 44′ E., a space 470 miles in length N. and S., and 70 miles E. and W. They are grouped together in clusters called *Atols (M. Atoḷu)*,‡ of which there are more than twenty in all, though ordinarily divided into *thirteen* groups, to which number they have been confined for centuries by the Máldivians themselves for political purposes.

Atols.

At the N. and S. extremities of the chain the Atols lie singly: in the centre they lie in double rows, with an intervening space of from 10 to 25 miles. Ihavandiffuḷu, the most Northern Atol, is distant about 350 miles from Cape Comorin, the nearest point of Hindústán, and Mále Atol (central) about 400 miles from the nearest port of Ceylon.

Reefs.

Barrier reefs encircle the Southern Atols, fortifying them admirably against the violence of the waves and the severe storms which not unfrequently visit these islands; but North of lat. 3° 30′ N. none of the Atols are thus protected, except in a few detached parts. These reefs are in many places just awash; in others, they form long stretches of sand less than eight feet above sea level, and are either circular or oblong. The descent on the sea-face of islands and reefs is very abrupt, no soundings having been obtained at 200 fathoms close outside; but the rock does not appear to curve inwards below the surface so as to lessen the base.

Passages.

Each of the enclosing reefs contains *openings* or *gateways*§ *(M. kaḍu)* which constitute convenient passages for vessels and boats. They are very deep and used by Máldive boats in passing from one Atol to another; some will admit the largest ships. Within the Atols the sea is free from storms, and safe anchorage is found in 20 or 30 fathoms very smooth water with bottom of coral and sand.

Channels.

The *channels*‖ which divide the Atols are in some cases deep and safe, but others are intricate and only fit for steamers, as the currents run strong through them to East or West, according to the season.

By day, all the channels, and some of the openings, amongst the islands and reefs, may be traversed without anxiety, as all the coral dangers are visible at some distance from the masthead, owing to the clearness of the water and the intense whiteness of the coral.

By night, ships prefer to pass only through the four larger channels between the Atols; these are:—

1. The KARDIVA, or FIVE-DEGREE CHANNEL *(Kaharidú Kaḍu)*, between Fádiffoḷu, Málosmaḍulu, and Goidú (Horsburgh) Atols, on the N.W., and Mále and Ari Atols, on the S.E., 24 miles in breadth and 67 in length. *Kaharidú* (Kardiva Island) lies athwart the way in mid-channel.

2. The VÉIMANDU', or KOḶUMAḌULU CHANNEL *(Véimandú Kaḍu)*, between Koḷumaḍulu and Haddummatí Atols, 15 miles in breadth.

3. The ONE-AND-A-HALF-DEGREE CHANNEL, 50 miles broad, between Haddummatí and Huvadú (Suvádiva) Atols, the widest and safest of all the channels, usually traversed by homeward bound steamers during the S.W. monsoon.

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* Summarised chiefly from Taylor's Sailing Directory, 1874, Part I., pp. 567, 569, and Encyclopædia (Horsburgh, Owen, and Moresby, in R. Geo. Soc. J., Vols. II. & V.)

† Note (1). ‡ Note (2). § Note (3). ‖ Note (4).

THE MÁLDIVES.

South of the Equator :—

PHYSICAL FEATURES.

4. The EQUATORIAL CHANNEL, between Huvadú (Suvádiva) and Aḍḍú Atols, 46 miles in breadth, but having the island *Mulaku* lying a little S.E. of its centre.

" No general description will do for the *currents** in the many channels that exist amongst this chain of islands, and as yet there are but few recorded observations, and these are for only a very small portion of the year. Regular *tides* also occur throughout the group, and a tide may be mistaken for a current. As a general rule the currents set Eastward from June to September : then Southerly along the West side of the Islands till December, in the end of which month they commence setting Westward strong through the Kardiva and other channels below that to the Equator (but only extending to Aḍḍú Atol from mid-January to mid-February), and they run in that direction till April. In May they are variable and uncertain till the S.W. monsoon is established.

" The Equatorial Channel currents are very strong ; for half the year they set Westward, and for the other half Eastward, according to the monsoon, but are subject to checks from variable winds."†

Islands.

The *islands*‡ are generally situated along the enclosing coral reefs, the central part of the Atols containing comparatively few. They are usually circular, or oval, in shape, and all are small, not many exceeding a mile in length and breadth. Many are mere narrow strips 50 to 100 yards wide, enclosing a lower tract filled with broken coral rock, and dry at spring tides. In such places there is sometimes a considerable depth of water forming perfect lagoons The islands are in general not more than 5 or 6 feet above the level of the sea, so that until near approach the cocoanut trees on them appear to be growing out of the water.

Among the natives an idea is prevalent that the islands gradually waste away and decrease in number by the constant action of the surf.§ In some the fringing cocoanuts stand in the water, whilst in others the submerged black soil of the islands is discernible at low water, some yards from the beach. It is, however, acknowledged that reefs have risen from the water, and barren sandbanks become habitable wooded islands.‖

Geological structure.

A glance at a map of the Indian Ocean will suffice to induce the conviction, that the Laccadive, Máldive, and Chagos groups, belong to the same submerged mountain range on which the coral polypi have constructed their reefs extending from lat. 12° 24′ N. to lat. 7° 39′ S., a distance N. and S. of 1,200 miles. The madrepore reefs and islands of this long chain crop up here and there with unequal intervening spaces of ocean, but possessing a similar character as to their geological formation throughout.

The substructure of the Máldive group appears to be generally as follows. On the surface sand mixed with vegetable matter, forming a dark-coloured light soil, which covers two or three feet of pure sand. Below this there is a soft sandstone, resembling particles of beach sand indurated. This sandstone is about two feet thick, when it softens again to sand, in which fresh water is found.

Water.

Nearly all the inhabited islands possess *fresh water*, a remarkable fact mentioned as early as the 6th century by Cosmas, and confirmed thirteen centuries later by an analysis of some of the water itself.¶

Vegetation.

Most islands are covered by a thick, in parts impenetrable, jungle, among which are to be found all the ordinary shrubs and plants common to the seaboard of Ceylon :—screwpines (*M. Karhikeyo*, *S.* Veṭakeyiyá, වැටකෙයියා, *Pandanus Odoratissimus*, L.), and cocoanuts (*M. Kárhi-ru*, *S.* Pol-gaha, පොල්ගහ, *Cocos Nucifera*, L.) tower thickly over all ; the bamboo (*M. Uni*, *S.* Una, උන, *Bambusa Vulgaris*, Wendl.) is rare. On some islands there are many fine large trees, such as the banyan (*M. Nika-gas*, *S.* Nuga-gaha, නුගගහ, *Ficus Indica*, L.), the bread fruit (*M. Bambakeyo-gas*, *S.* Del-gaha, දෙල්ගහ *Artocarpus incisa*, L.), and the *kadú* (*M.*)

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* Note (5).

† Taylor's Sailing Directory, Part I., p. 656.

‡ Note (6).

§ Note (7).

‖ Trans. Bombay Geo. Soc. 1836-8 (reprint 1844), pp. 56, 105.

¶ Note (8).

NOTES.

(1)

MÁLDIVE ISLANDS.—Various derivations of the appellation have been favoured by different writers:— Máldive Islands.

1. From *mal* and *diva* (dwípa) "the thousand islands." (Barros; Pinkerton, Vol. VII. p. 182; Bennett, p. 351.)
2. From *maha laala diva.* (Pridham, Vol. II. p. 605.)
3. *(a) Malaya-dwípa:* "from the mountain of *Malaya.*" (Sir W. Jones, Vol. III. p. 173.)
   (b) "The *Maldives* may have been the *dives* or islands of *Malĕ*, whilst *Malabár* was the continent or mainland of *Malĕ* [Mala "mountain" Maḷ.]." (Caldwell, Comparative Dravidian Grammar, p. 27-8.)
4. From *Málé*, the name of the chief (Sultan's) island, and *diva* (dwípa) "island."

The last is undoubtedly the correct explanation, as Ibn Batuta stated five and a half centuries ago. He calls them collectively *Dhibat-al-mghál*, and the principal island *Mahál* "the province after which all the islands are called." *Mahál* naturally contracts into *mál*, as in Tamil. Pyrard (p. 89) too is clear on this point:—"L'isle principale, comme j'ay dit, s'appelle *Malé, qui donne le nom à tout le reste des autres:* car le mot de *Dives* signifie un nombre de petites isles amassées." Elsewhere (p. 63): "Ce royaume en leur langage, s'appelle *Malé-ragué*, Royaume de Malé, et des autres peuples de l'Inde il s'appelle *Malé-divar*, et les peuples *dives.*"

The name *Máledíva*—probably assumed after the Arab ascendancy—may mean either *(a)* 'the wealthy island' (Arabic, *mál*, 'riches' or 'wealth') owing to its pre-eminence in the group; or more naturally *(b)* 'the palace island,' *Mahaldiva* (Hind. *mahal* 'palace').

To this day the Islanders appear to use no general name for themselves, or for the whole Archipelago, but distinguish between the several Atols and their inhabitants, as *Tiladummati*, *Gaufaru*, *Huvadú*, and speak of the Sultan's Island alone as *Málé*, or less frequently *Máledíva.* By the natives of Ceylon, Máldivians are commonly called *Gundara kárayo—i. e.*, 'the gundara (boat) men'—and the Islands *Máladiva* or *Máladiv dúpat.*

It is interesting to find the name 'Islanders' (*Divi*) under which they figure in the account of the embassy to the Emperor Julian (A. D. 363) surviving in the annual letters of the Máldive Sultans of the last century at least. In these the Sultan's dominion is always distinguished as *Divehi rájja* *—*i. e.*, 'the Island Kingdom,' and his subjects as *Divehi míhun*†—*i. e.*, 'the Islanders.' The old Máldive character bears the name *Dives* or *Divehi akuru* ‡—*i. e.*, 'the Island letters.'

(2)

ATOLS.—"The coral formations and reefs of Ceylon belong to what are called 'rising' or stationary reefs, in contradistinction to atolls, or 'sinking reefs,' to which the Maldives and Laccadives belong.....According to Mr. Darwin's theory, which is generally accepted as correct, the singular circular form of the Maldive Islands, in common with most 'atolls,' is owing to the gradual sinking of the bed on which the madrepore originally raised their coral superstructure. Thus, the Maldive Islands indicate or mark the peaks of a long chain of mountains which have gradually sunk beneath the ocean. Viewed in this light, there must have existed formerly where those islands now are, a large tract of land, the shores of which, from their proximity to Ceylon, would have been very near it, if not actually joined.....' The coral-forming polypi begin to build in water at a moderate depth, and while they are yet at work the bottom of the sea subsides gradually, so that the foundation of their edifice is carried downwards at the same time that they are raising the superstructure; if, therefore, the rate of subsidence be not too rapid, the growing coral will continue to build up to the surface, the mass always gaining in height above its original base, but remaining in other respects in the same position. Not so with the island: each inch lost is irreclaimably gone; as it sinks, the water gains foot by foot, till in many cases the highest peak of Atols.

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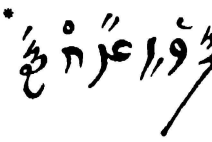
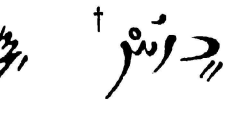
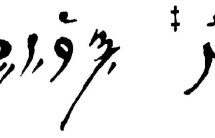
*  †  ‡ 

THE MALDIVES

PHYSICAL FEATURES.

Notes.

the original island disappears. What was before land then becomes a lagoon. (Lyell on Coral Reefs, ii, 602, quoting Mr. Darvin.)'

"A singularity in the formation of the Maldive atolls consists in their being made up not of one continuous circular reef, but of a ring of small coral islets sometimes more than one hundred in number, each of which is a ring-shaped strip of coral surrounding a lagoon of salt water, nearly every ring having an opening in it, and the same occurs in the principal atolls, which enables vessels to sail into them. The lagoons vary from 15 to 49 fathoms in depth.....the openings in them are attributed to the passage outward of this sediment during a reflux of the sea.....Many of the minor atolls are 3, and some 5 miles in diameter. The larger atolls of the Maldives appear to have been broken up into smaller ones by currents sweeping across them and making a passage. The channel dividing the Madow Atoll [Mú̱losmaḍulu Atol] is attributed to this cause." (Ceylon by an Officer, Ceylon Rifles, 1876, Vol. I. p. 70-2.)

"Aussi on diroit à voir le dedans d'un de ces Atollons, que toutes ces petites isles et la mer qui est entre-deux n'est qu'une basse continuée, ou que ce n'eust esté anciennement qu'une seule isle, coupée et divisée depuis en plusieurs." (Pyrard, p. 72.)

"Mr. Darvin considers it not improbable that the first formation of the Maldive Archipelago was due to a barrier reef of nearly the same dimensions as the long narrow island of New Caledonia. The greater part of the inhabited atolls is formed of breccia; they are all higher on the windward side, where the broadest and most habitable portion lies." (Ceylon, by an Officer, Ceylon Rifles, Vol. I. p. 72.)

"The aspect of these annular reefs is very striking, in their more or less concentric rings of different colours. First, there is the central portion of the lagoon, an exquisite chrysophrase green —a colour that 'never was on sea or land' save only in gems and these coral atolls; then a broad zone of the same, dotted and freckled with olive green; then the reef itself, a deep olive brown, interspersed with little patches of dark green, and everywhere frosted with the snowy curls of the breakers; then a narrower or wider belt of bright apple-green, and beyond the deep purple of the open sea." (A. Hume, in "Stray Feathers," Vol. IV. p. 429.)

(3)

Openings.

OPENINGS OR GATEWAYS.—Pyrard (p. 76-77) notices as "very remarkable" that the Atols have each *two* of these entrances on either side, thus allowing ingress and egress to vessels at all times. Some are fairly broad, others very narrow, ranging from about 200 paces to 30 or even less. "Aux deux costez de chacune de ces entrées par tous les Atollons, il y a deux isles, une de chacun costé. Vous direz que ce seroit pour garder l'entrée, *comme de fait il seroit fort aisé, si on vouloit avec du canon, d'empescher les navires d'y entrer.*"

(4)

Channels.

CHANNELS.—Laval (p. 74-78), omitting the *Vêimandû* and *One-and-a-half Degree Channel*, enumerates as the four channels *(Candou)* "which are much broader than the rest, and easily navigable by the largest vessels":—

1. That through the *Malos madou* [Mú̱los maḍulu] Atol—"at the entrance of which we were wrecked"—probably the *Moresby Channel (M. Dekunu kaḍu)*.
2. The *Caridou* [Kaḷaridú] Channel,
3. The *Addou* [Ariyadú] Channel.
4. The *Souadou* [Equatorial] Channel, "which is directly below the Equator—the broadest of all, more than twenty leagues across."

(5)

Currents.

CURRENTS.—"Le plus grand inconvenient, ce sont les courants *Oyvarou* [*M. oyivaru*], lesquels courent tantost à l'Est, tantost à l'Oüest, entre les canaux des isles, et en divers endroits de la mer, six mois d'un costé, six mois de l'autre: non pas si certainement six mois d'un costé et d'autre, mais quelquefois plus, quelquefois moins. C'est ce qui les trompe et les fait perdre d'ordinaire..... principalement les courants y portent les navires malgré eux, quand les calmes ou les vents contraires les surprennent et qu'ils ne peuvent bien s'aider de leurs voiles, pour se tirer des courants." (Pyrard, p. 75, 77.)

(6)

Islands.

ISLANDS.—Their number has been variously stated. The two Muhammadan travellers of the 9th century make it 1,900; Ibn Batuta says "about 2,000." (Gray, J. R. A. S. Vol. X. Art. 8, p. 196, Note 4.) "The number" [of Indian islands], writes Marco Polo, "is quite incredible. I have heard indeed from mariners and eminent pilots of these countries, and have seen in the writings of those who have navigated the Indian seas, that they amount to no fewer than 12,700,

including the uninhabited with the inhabited islands." And Linchoten (cap. XIII, p. 16): "*Quidam harum insularum numerum ad* 11,000 *ferunt, sed non est certa ratio. Innumerabiles enim sunt.*" (Marsden's Marco Polo, p. 717.) Captain Owen believed the total number was three or four times 12,000 (J. R. G. S. Vol II. p. 84); whilst Captain Hamilton sneers at them as "a parcel of islands that cannot be counted." (Pinkerton, Vol. VIII. p. 389.) According to Pyrard, the Máldive Sultan claimed to rule 12,000 islands. "This," as Col. Yule observes, "is probably the origin of the proverbial number." (Marco Polo, Vol. II. p. 358.)

No one had better means of ascertaining the approximate number than Pyrard, who thus disposes of the difficulty (p. 71-2):—"Au dedans de chacum de ces enclos [*atollons*], sont les isles tant grandes que petites, en nombre presque infiny. Ceux du pays me disoient qu'il y en avoit jusques à douze mille. *J'estime quant à moy, qu'il n'y a pas apparence d'y en avoir tant, et qu'ils disent douze mille, pour designer un nombre incroyable, et qui ne se peut compter.* Bien est il vray qu'il y en a une infinité de petites, qui ne sont *quasi* que des mottes de sable toutes inhabitées. Davantage le Roy des Maldives met ce nombre en ses titres, car il s'appelloit *Sultan Ibrahim dolos assa ral tera atholon*, c'est à dire *Ibrahim Sultan Roy de treize provinces et de douze mil isles.*"

(7)

ISLANDS WASTING.—"Quoy qu'il en soit, les courants et les grandes marées diminuent tous les jours ce nombre [isles], comme les habitans m'ont appris, qui disoient mesme qu'aussi à proportion le nombre du peuple diminuë, et qu'il n'y en a pas tant qu'il y en avoit anciennement." (Pyrard, p. 72.) Islands wasting.

(8)

WATER.—"Ils [isles inhabitées qui n'ont aucune verdure] n'ont point d'eau douce que rarement; les autres isles couvertes, et habitées ou non, en ont; excepté quelques-unes où les habitans sont contraints d'en aller chercher aux isles circonvoisines: aussi ils ont des inventions pour recevoir celle qui tombe du Ciel. Et encore qu'il y ait des eaux en ces isles, elles ne sont pas semblables les unes aux autres, estant bien meilleures en un endroit qu'en un autre. Toutes les eaux de puits ne sont pas fort douces ny fort salubres. Ils font leur puits de cette façon: c'est qu'en creusant trois ou quatre pieds en terre, peu plus ou moins, on trouve de l'eau douce en abondance, et ce qui est fort estrange, à quatre pas du bord de la mer, mesme aux lieux qu'elle inonde souvent. J'ay observé que leurs eaux sont fort froides le jour, principalement à midy, et la nuit fort chaudes." (Pyrard, p. 73.) Water.

Farther on (p. 89) he states that the water of Málé Island was so bad, that the king and the chief people were forced to procure water from a neighbouring island in which no interments were made—perhaps "*Bandos*" [*Bados*] where the water was "plus salubre" (p. 62).

Christopher, however, in commenting on Laval's opinion, remarks:—"We found wells very common all over the islands, few compounds being without one; but we never heard that the natives entertained such an opinion as he has expressed respecting the quality of the water. Our host, the Vizier, and his family used the water of the well in the yard, and we followed their example."*

From the following report made last year (December 5th, 1879) on a sample of the ordinary well water of *Gaufaru* Island (lat. 4° 42′ N.) it would appear that the Máldive Islanders are better off in this respect than is generally believed:—

"I have analysed very carefully the water sent me. It is a great deal purer than most of the water drank in Colombo. It had a rather clayey colour, due probably to its being so long [a fortnight] in the India rubber bottle, or to its percolation through a clay bed.

	Grains per gallon.		Degrees.
Total solids	56·2	Hardness (Clarke's scale):—	
Oxygen used to oxidise organic matter	2·380	Total	8·
Chlorine as chlorides, &c. ...	16·	Permanent	4·5
Ammonia:		Temporary	3·5
Saline	·0056		Grains.
Albuminoid ...	·0042	Equal to carbonate of lime in a gallon	7·

"Professor Wanklyn allows that a water should not be condemned unless it contains ·10 parts of Albuminoid Ammonia in a million parts. This water contains ·06 parts per million of Albuminoid Ammonia, and is therefore perfectly fit for drinking. The large amount of solids is due to the presence of sand in considerable quantity in the specimen." (*Report of an analysis of water from the Máldive Islands* by T. F. Garvin, M.D., Public Analyst, Ceylon.)

* Trans. Bombay Geo. Soc. 1836-8 (1844) p. 58.

THE MÁLDIVES.

CLIMATE.

II.—CLIMATE,

AS AFFECTING HEALTH.

Climate.

The climate* of the Máldive Islands as regards the feeling is neither oppressive nor disagreeable.

Thermometer.

The range of the *thermometer* is moderate. In December, January, and February, the coolest season, it averages from 80° to 84° during the day: at night it falls to 78°. In April it varies from 85° to 90° in the daytime, and generally falls to 80° in the night. The winds moderate the solar heat, and prevent its being so oppressive as might be supposed from the height of the thermometer.

Winds & Weather.†

"As the Máldives occupy a space of nearly 8 degrees of latitude, and are partly South of the Equator, it may be expected that their climate will be influenced on the one hand by the N.W. monsoon of the Chagos and Seychelles, and S.E. trade when it blows up to the line: on the other hand, by those atmospheric disturbances which usher in the N.E. monsoon of Hindústán and Ceylon.

"NORTHERN MÁLDIVES. At Ihavandiffulu Atol, the head of the Máldives, the N.E. monsoon is steady from mid-December to the end of February, between N.N.E. and E.N.E., moderate and light breezes, with slight showers of rain about every fortnight. In March and April the winds incline more from N. and N.W.—with gales and squalls from uncertain directions in the latter month—until in May the S.W. monsoon commences, and lasts four months only. In September the winds become N.W., but occasionally West squalls accompanied by rain. In October the winds are moderate and variable from W. by S. to N. by W., when the weather is cold and pleasant, but occasionally hard squalls occur with heavy showers of rain at about the same period as the Bombay *elephanta*. In November the winds are light between N.N.E. and N.N.W., with occasional Easterly squalls; after the middle of the month there occurs a period (about one week) of dark cloudy tempestuous weather, with long-continued rain from the West; this seems to be at the same time as the change of monsoon in the Gulf of Mannár; after which the N.E. monsoon is fairly established, and throughout December is steady at E.N.E., with pleasant and clear weather, but occasional squalls and rain from about E.S.E.

"MÁLE ATOL, the central part of the Máldives, marks a great difference in the weather during the N.E. monsoon, for the Southern groups then experience frequent squalls and rain with variable winds: whereas to N. of Mále, that is the season (as at the Lakkadives) of fine weather and generally moderate breezes. There is no such marked difference in the S.W. monsoon.

"SOUTHERN MÁLDIVES. Aḍḍú-Atol, being 40 miles to the S. of the Equator, is almost without the influence of the regular Indian monsoons; the winds and weather being very variable, subject to squalls and rain. The N.E. monsoon is felt in January, February, and March; the winds generally from N. and N.E., but occasionally from W. of North, and the weather is less cloudy and rainy than when the S.W. monsoon prevails N. of the line. In April and May the winds are variable, but mostly from the Westward. From May to December the winds are from W. by S., to S. and S.S.E., with much rain and squalls. About the middle of the latter month, which is about the time that the S.E. trade finally retires Southward, and the N.W. monsoon commences below the Equator, hard squalls and fresh gales from W. to W.N.W., with heavy showers of rain, occur at the Equatorial Channel, lasting for about a fortnight."‡

Most rain falls in the Southern Atols, and the decay of the rank vegetation, engendered in the light sandy soil, breeds much sickness.

Health.

The climate cannot be considered salubrious even for the natives, judging by its influence on them. Its unhealthiness for Europeans has become notorious, and has undoubtedly been a great obstacle to foreign intercourse and internal improvements.

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* Note (1). † Note (2). ‡ Taylor's Sailing Directory, Part I., p. 653-4.

Dr. Campbell attributes the cause of strangers losing their health partly to the lagoons and marshes formed throughout the Islands, and partly to the unvarying temperature of the climate, due to the absence of the influence which the continent of India has in cooling the air at night, and increasing the heat during the day.* Additional cause may be found in the ubiquitous growth of low jungle, allowed to spring up unchecked round habitations to the exclusion of the sea-breeze and inducing of malaria, and in the want of any attempt at systematic drainage.

CLIMATE.

Among the natives *intermittent fever* and *ague* (*M. huma, hung*) are very prevalent, and are said to be difficult to shake off †—resulting in, if not accompanied by, *disease of the spleen* (*M. buriturá*—Pyrard, "*ont cory*," p. 93, "*on cory*," p. 133) and *ulcers* (*M. fáygadu*), both attributed to bad water.

Diseases.

Small-pox (*M. karhivaduri*) has occasionally visited the Islands, though stringent quarantine laws have for centuries been in force to prevent its importation.‡

Itch (*M. kas*) is very common; as are *coughs* (*M. kessang*), and *colds* (*M. adidafus*), natural to a humid atmosphere.

Dysentery (*M. béra' hingun*) is not unknown, but cases are somewhat rare.

"The sickness to which strangers are most liable is a bowel complaint, which appears peculiar to these Islands. The only remedy is immediate departure for the continent. Dr. Campbell has collected many cases in which the destructive effects of the sickness upon foreigners is shown; but the natives also appear liable to it, for in one instance nearly the whole population of an island was carried off. There appear to be few other diseases of importance, with the exception of *beri beri*."*

A curious *sun blindness*—apparently somewhat similar to the *snow* blindness of the Arctic regions—affects, after sunset, the natives who have been much exposed to the dazzling glare during the day. Pyrard, who calls it *rosnans* [*M. rekanu*] did not escape (p. 132).

It was noted in 1834-6 that many of the Islanders in the Huvadú (Suvádiva) Atol suffered from *elephantiasis* [*M. barosbali*].

The mortality among children is said to be above the average, not more than one in five attaining maturity. But this high death rate may be fairly doubted; grey heads are not uncommon, nor do the aged in general appear emaciated. Seventy is not considered an unusual age.§

NOTES.

Notes.

(1)

CLIMATE.—"Par ce que j'ay dit que ces isles sont si proches de l'equinoctial, de çà et de là, on peut juger quelle est la qualité de l'air, qui est fort intemperé, et la chaleur excessive. Toutefois le jour et la nuit y sont égaux en tout temps, et les nuits y sont fort fraiches, et amenent force rosée. Cette fraischeur, est cause qu'on peut habiter le pays moins incommodement, et que les herbes et les arbres foisonnent, nonobstant l'ardeur du Soleil. L'Hyver commence au mois d'Avril, et dure six mois, et l'Esté au mois d' Octobre, qui dure six autres mois. L'Hyver est sans gelée, mais continuellement pluvieux. Les vents sont aussi pour lors fort impetueux du costé de l'Oüest; au contraire l'Esté est extremement chaud, et il n'y pleut jamais. Les vents sont du costé de l' Est." (Pyrard p. 78.)

Climate.

It should not be forgotten that the above remarks apply to the weather experienced mainly at *Mále Atol*—about the centre of the chain—where Laval spent most of his time.

(2)

WEATHER.—"Les vents sont assez souvent fixes, comme les Courants du costé de l'Est ou de l'Oüest; mais ils varient bien davantage, et ne sont pas si reglez, biaisans quelquefois vers le Nord ou vers le Sud." (Pyrard, p. 76.) "Ces *Monssons* ou *Muessons*, sont vents qui changent pour l'Esté ou l'Hyver de six en six mois; et qui trompent le plus souvent quand on part trop tard,

Weather.

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* Trans. Bombay Geo. Soc. 1836-8 (1844) p. 106. † Note (3). ‡ Note (4).

§ Trans. Bombay Geo. 1836-8 (1844) p. 68.

THE MALDIVES.

CLIMATE.

Notes.

et le vent contraire vient cependant qu'on est lá ; aussi trompent ils encore, en ce qu'ils sont par fois plus courts ou plus longs l'un que l'autre : et celuy qui est propre sera plus court, et son contraire plus long d'un mois ou six semaines, et quelquefois de deux mois plus qu'on ne pense. Cela contraint par fois de sejourner sept ou huit mois plus qu'on ne veut, comme j'ay veu arriver assez souvent." (Pages 199-200.)

(3)

Máldive fever.

MÁLDIVE FEVER.—Europeans seem especially liable to this fatal scourge of the Islands. Many have been the ill-fated survivors of wrecks on the Atols who have but exchanged "a watery grave" for a slower death from this insidious pest. "All the British officers and men, who remained on the island of Málé during a part of the S.W. Monsoon, at the time of the survey (1834-6) were prostrated by it and compelled to leave." (Taylor's Sailing Directory, Part I., p. 569.) "On la connoist par toute l'Inde," observes Pyrard—who himself nearly succumbed to a severe attack of the malady—"sous le nom de fiévre des Maldives. Ils l'appellent *Malé ons* [*Málé hung*]. C'est de cette maladie que la pluspart de mes compagnons estoient morts, *comme tous estrangers ne manquent pas d'en estre bientost atteints.*" (Page 63.) "La fiévre y est fort commune, qu'ils appellent *homan* [*huma*]; *mais elle est fort dangereuse aux estrangers qui abordent là, et elle les consomme en peu de jours.*" (Page 132.) And later (p. 199) he specifies "Málé fever" as dreaded by traders no less than the currents and reefs of the group.

It appears, however, not to be an altogether "unmixed evil" for residents :—"Quand on en reschappe, on peut s'asseurer qu'on guarira des autres maladies ausquelles l'air du pays est sujet : d'autant que l'on tourne l'air du pays et la maniere de vivre en habitude, et comme si cette maladie avoit fait un corps nouveau, on s'y sent du tout accoustumé. Et de fait un estranger qu'ils appellent en leur langage *Pouraddé* [Christopher, *furadi mika*] s'il en guarit, ils disent qu'il est *dives*, comme qui diroit naturalizé et non plus estranger." (Page 63.)

(4)

Small-pox.

SMALL-POX —"De dix ans en dix ans il vient une maladie appellée *carivadiri* [*karhiraduri*], pour laquelle ils s'abandonnent les uns les autres, comme si c'estoit la peste. Ella ressemble à la verolle des petits enfans de deça, et de cette maladie il meurt beaucoup de peuple." (Pyrard, p. 132). It is greatly dreaded. On small-pox breaking out among the crew engaged in operations connected with the wreck of the S. S. "Sea Gull" (December, 1879) the inhabitants of *Gaufaru* island are said to have forthwith fled *en masse* to another island.

III.—POLITICAL DIVISION.*

THE ATOLS.†

THE Máldive group is divided politically into thirteen *Atols* (*M. Atoḷu*), as follows:—

1.—TILADUMMATI' ATOL.
- *a.* Ihavandiffuḷu Atol.
- *b.* Tiladummatí Atol.

2.—MILADUMMAḌULU ATOL.
- *a.* Makunudú (Malcolm Atol).
- *b.* Miladummaḍulu Atol.

3.—FÁDIFFOḶU ATOL.

4.—MÁḶOSMAḌULU ATOL.
- *a.* North Máḷosmaḍulu Atol.
- *b.* South Máḷosmaḍulu Atol.
- *c.* Goidú (Horsburgh Atol).

5.—MÁLE ATOL.
- *a.* Kaharidú (Kardiva Island).
- *b.* Gaufaru Reef, and Island.
- *c.* North Mále Atol.
- *d.* South Mále Atol.

6.—ARI ATOL.
- *a.* Toḍḍú Island.
- *b.* Rasdú (Ross Atol).
- *c.* Ari Atol.

7.—FELIDU ATOL.
- *a.* Felidu Atol.
- *b.* Waṭṭaru Reef.

8.—MULAKU ATOL.

9.—NILANDU ATOL.
- *a.* North Nilandu Atol.
- *b.* South Nilandu Atol.

10.—KOḶUMAḌULU ATOL.

11.—HADDUMMATI' ATOL.

12.—HUVADU' (SUVÁDIVA) ATOL.

13.—AḌḌU' ATOL.
- *a.* Mulaku Island.
- *b.* Aḍḍú Atol.

Málé Island.—The capital, where the Sultan resides, is situated in lat. 4° 10′ N., long. 73° 30′ E., at the South extreme of the North Mále Atol.

1.—TILADUMMATÍ ATOL.

(a.) IHAVANDIFFUḶU ATOL, the head of the Máldive group, lies off the N.W. side of Tiladummatí Atol, from which it is separated by the deep *Gallandú Channel* [*Gallandú kaḍu*], wide at the E. mouth, but narrowing to less than 3 miles on the W. In length N.W. and S.E. the Atol is 12 miles; crosswise it measures 7 miles. It has 24 islands, lying all round the boundary reef, but the principal ones are on the S.W. and N.E. sides. Only seven were inhabited (1834-6) by a population of 760 souls. Wood, water, and some supplies are procurable. Ihavandiffuḷu Atol.

Ihavandú, towards the S., was the chief island, from being the residence of the *Atoḷuveri*. It is nearly one mile in length, and planted with cocoanut, breadfruit, yams, and nacherin (*M. bimbi*). This island is well adapted for a coal depôt.

Turákunnu, the most Northerly island of the whole of the Máldives, is in lat. 7° 7′ N., long. 72° 53′ E.

One long barrier reef forms the W. side of the Atol. Its South extreme is another barrier reef. Along the E. margin there are nine islands. Between most of this Atol's islands there are passages for ships. The general soundings in the centre are 20 to 30 fathoms, with several coral patches dotted about.

(b.) TILADUMMATI' ATOL stretches S.S.W. for 30 miles, and contains nearly 40 islands generally of a fair size, and some distance apart; those at the N. and E. extremes are largest and inhabited, affording good water and some supplies. *Kelai*, the North island (lat. 6° 59′ N., long. 73° 12′ E.), covered with cocoanut trees, forms a very prominent point to the Atol. The West boundary has fewer islands, but more reefs. Safe passages occur between all. Tiladummatí Atol.

The coir yarn made in Tiladummatí Atol ranks highest in the market.

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* The description of the several Atols is for the most part condensed from Taylor's Sailing Directory, Part I., pp. 570-85, which should be consulted for fuller particulars regarding tides, currents, channels, anchorage, &c.

† Note (1).

THE MÁLDIVES.

POLITICAL DIVISION.

2.—MILADUMMAḌULU ATOL.

Makunudú (Malcolm Atol).

(a.) MAKUNUDU (MALCOLM ATOL), a large lagoon reef, 15 miles long by only 3 miles broad, lies 10 miles W. of the N.W. part of Miladummaḍulu group, and 24 miles N.W. of *Powell Islands*, at the North of the Máḷosmaḍulu Atol. It is said to have been unknown to Europeans previous to the survey of the Máldives in 1834-36. According to native information many ships have been lost on its barren reefs with all hands, scarcely a vestige of the wrecks remaining after a few hours, from the violence of the surf and the perpendicular sides of the reef. The lagoon is deep, but full of coral patches, and has two boat passages along the E. barrier. Except *Makunudú* island (lat. 6° 25′ N., long. 72° 41′ E.), inhabited, on the N.E. point, and a small island on the N.W., there is nothing but the surf to mark the reef.

Miladummaḍulu Atol.

(b.) MILADUMMAḌULU ATOL is in reality a continuation of Tiladummatí, being on the same plateau of soundings, and the frontier islands of both being visible one from the other. This Atol contains 101 islands, principally along the E. and S.E. parts of the boundary, extended over a space 55 miles in length N.W. and S.E., by not quite 20 miles in breadth. In 1834-6 there were 29 islands inhabited by a population of 1,700 or 1,800. Along the W. frontier are not many islands, but more detached lagoon reefs. Ships can easily pass through this group in the daytime, as the islands and reefs which form the boundary are separated by broad passages into the interior, where the general depths are from 20 to 25 fathoms, sandy bottom.

The principal islands are *Manadú* and *Kedikoḷu*. *Kaḍudú*, the S. island, is in lat. 5° 39′ N., long. 73° 17′ E. *Manadú*, at one time the residence of the *Atoḷureri*, is a beautiful island, with groves of breadfruit and other trees, a fine pathway, and good landing places.

On some islands a little cotton is grown; good water and some supplies may be obtained.

3.—FÁDIFFOḶU ATOL.

Fádiffoḷu Atol.

FÁDIFFOḶU ATOL lies 10 miles S.E. of Miladummaḍulu, N. of Kaharidú (Kardiva) island, and E. of Máḷosmaḍulu Atol. Of a square shape, with its N.E. and S.W. sides pressed in, and the others rather convex, it presents four prominent corners. At the S. corner stands *Aligau* island (lat. 5° 15′ N., long. 73° 29′ E.), 16 miles N. by E. of Kaharidú (Kardiva), marked by high trees; at the W. corner is *Kanifurhi* island (lat. 5° 20′ N.), bearing N.E. 10 miles from the E. point of South Máḷosmaḍulu Atol. The *Atoḷuveri* resided at *Máfurhi* (lat. 5° 26′ N.). Passages into the interior occur between all the islands on the N.W. side, and between several islands on the S.W. side; along the N.E. concave face only a few openings are found, and those in the N. half; thence nothing but an extensive barrier reef, 18 miles in length, stretches round the E. extreme and down the S.E. face, on which the N.E. monsoon breaks with violence. Within the Atol the general depths, on a sandy bottom, are from 25 to 30 fathoms, but many coral patches and sunken reefs exist. There are upwards of 20 islands, but only four were inhabited in 1834-36 by 550 persons. The N.W. islands can furnish good water and some supplies.

4.—MÁḶOSMAḌULU ATOL.

Máḷosmaḍulu Atol.

MÁḶOSMAḌULU ATOL. This West Atol, lying only 7 miles S.W. of Miladummaḍulu Atol, is upwards of 50 miles in meridional length, and is divided into *two* distinct groups by a narrow, but deep passage, called by the surveyors *Moresby Channel (M. Dekunu kaḍu.)*

North.

(a.) NORTH MÁḶOSMAḌULU is 35 miles in length N. and S., and 15 miles across at its broadest part. Its W. side is composed of a series of round or oval reefs irregularly placed, some prominent, others retiring—a feature peculiar to all these Northern Atols—with little to mark them, whilst the E. side is a gentle curve with a series of islands, 20 in number, between which good passages lead into the Atol. No vessel could navigate through the intricacies of the Atol's centre; but its N. end is narrow and clear of reefs. The general depths are from 23 to 27 fathoms, water. *Ettigili* and *Alifurhi*, the two *Powell*

Islands (lat. 5° 59′ N., long. 72° 54′ E.), inhabited, standing on a detached reef of their own with no soundings off it, mark the N. end of the Atol.

None of the islands have good water, except *Fainu* (lat. 5° 27′ N.), where (1834-6) the chief of the Atol lived.

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(b.) SOUTH MÁḶOSMAḌULU differs in shape from the N. group. Its E. point is prominent, and in the same latitude as the S. point of Fádiffoḷu Atol, which is distant nearly 20 miles. The length of this group is 26 miles from E. to S.W., and most of the islands border the S.E. face. The W. side is similar to that of the N. group, being composed of large, separate, lagoon reefs, with scarcely any islands to distinguish them. Passages into the interior occur between all the islands, and reefs, on the W., S.E., and N.E. boundaries. South.

Hitadú island (lat. 5° 1′ N., long. 72° 50′ E.) marks the S. point of the group. It contained (1834-6) 250 inhabitants.

The *Atoḷuveri* resided at *Daravandú* island. Wood and water are procurable. Cloth is woven in this Atol principally.

(c.) GOIDU′ (HORSBURGH ATOL)—a lagoon reef distant 25 miles W. by S. from Kaharidú (Kardiva) island, and the same distance N. from Toḍḍú island—marks the N. side of the W. entrance of *Kardiva Channel* [*Kaharidú kaḍu*] and is separated from Máḷosmaḍulu Atol by 6 miles deep water. This Atol is oval in shape and small, its greatest length E. and W. being 10 miles, and its breadth less than 5 miles. Its three large islands, on the N. and E. parts, were inhabited in 1834-6 by a population of 200. They afford wood, water, and some supplies. *Goidú* is the largest (lat. 4° 53′ N., long. 72° 58′ E.) The only entrance into the lagoon, called *Doru kaḍu*, is on the S. side of the Atol. In the interior there is fine anchorage in 17 to 20 fathoms, sandy bottom mixed with mud and clay, and free from rocks in the centre. Goidú (Horsburgh Atol).

5.—MÁLE ATOL.

(a.) KAHARIDU′ (KARDIVA ISLAND) (lat. 4° 58′ N., long. 73° 26′ E.), lies towards the E. end of the *Channel* to which it gives its name. It is covered with a dense mass of high cocoanut trees: contained (1834-6) 200 inhabitants: and can supply good water and some provisions. Kaharidú (Kardiva island).

Its S.E. side is convex and sheer, having no soundings in 240 fathoms, water, close to the beach. A circular lagoon reef on the N.W. side provides a snug anchorage for the islanders' boats. There is generally a heavy surf round the island, except at the sole boat passage through the fringing reef near the N.E. point. The natives are famed for their manufacture of excellent cordage.

(b.) About 15 miles south of Kardiva lies the ISLAND and lagoon REEF of GAUFARU, separated from Mále Atol by a narrow, but deep, channel, 1½ to 2 miles wide, with no soundings. It is as much a separate Atol as the similar lagoon reefs called Goidú (Horsburgh Atol) and Rasdú (Ross Atol). Gaufaru island.

Gaufaru island stands at the E. extreme of its own reef, and is approachable only through two narrow openings on the N.E. and N.W. faces, which are difficult to descry. It is inhabited by about 100 souls (32 houses), who are supported by fishing.

They possess not more than two or three fishing boats *(M. mas-oḍi)* and are poor. Rank jungle covers most of the island, but there are some cocoanut trees, and a few breadfruit, limes, and plantains, round the houses. From having no landmarks on its N., and W., sides, Gaufaru reef has proved very disastrous to vessels making a cut through the Máldives by the Kardiva channel.

MÁLE ATOL. Both N. and S. groups are included by the natives under one name, but being separated by a channel without soundings, they are really *two* distinct Atols. Mále Atol.

(c.) NORTH MÁLE ATOL is of irregular shape, taperingat the N., S., and E. ends, convex on the W., and concave on the N.E. and S.E. faces. In length 32 miles N. and S., it has a central width of 23 miles. It contains about 50 islands, (of which 12 were North.

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inhabited in 1836,) and innumerable coral reefs. The general depths in the interior are from 25 to 35 fathoms, sandy bottom, but so numerous are the sandbanks and coral patches, that it can be traversed safely only in the daytime with a sharp look-out. All the openings into this, and other Atols, cannot be distinctly seen three or four miles off, the barrier reef presenting apparently one continuous threatening line. The passages are numerous on all sides. Lagoon reefs occur along the N., N.E., and S.W. faces. Some of the more important islands—after *Málé* or *Sultan's Island*—are *Diffurhi* (E.), *Girávaru* and *Hebadú* (W.), and *Makunudú* (W. centre).

Málé, or Sultan's Island.

Málé, or *Sultan's Island* (lat. 4° 10′ N., long. 73° 30′ E.), at the very South of this Atol, is the *capital* of the Máldive group.

It is oval in shape, low-lying like all these islands, and about one mile in length by ¾ mile in breadth. (Pyrard, "de tour environ une lieuë et demie," p. 89.) An unbroken reef, just awash, renders its South side inaccessible; but the rest of its circumference has a lagoon or harbour, formed by an artificial bank of coral three to four feet above water, and six to eight feet in width, roughly renewed from time to time, which serves as an effective breakwater against the monsoon storms. As the depth of the water inside is from six to fourteen feet, this harbour gives excellent shelter to both the trading *gundara (M. daturu oḍi)* and fishing boats *(M. mas oḍi)* of the natives. The only entrance, about 30 feet in width, is on the N. side, where the coral bank approaches the breach to within 60 or 70 yards.

At some period the island must have possessed a substantial *fort*. The remains of the stone wall, still solid in parts, shew that it was enclosed (except on the S. or barrier reef side), and strongly defended, by regularly designed bastions at various points. A few pieces of ordnance are still mounted at intervals along the fort wall, chiefly on the N. face, but rusted, choked with coral, and unserviceable.

The main bastion fronts the entrance to the harbour, and commands all approach from the North. It is 20 feet at least in height and faced with solid masonry. In 1835, according to Christopher, this fort was "a solid mass" filled with earth.* It must have been partially excavated since, as 10 or 12 steps now lead from the ground level, (where the old flagstaff still stands), to the upper tier, which is seven or eight feet below the top of the wall. The embrasures are bare, the iron guns lying unlimbered, and half buried in the grass, at the rear of the bastion. This fort was probably erected by the Portuguese, as Christopher supposed, for Pyrard mentions (p. 170) that on one of their temporary occupations of Málé in the 16th century, "ils firent une forteresse."

The Sultan's Palace *(M. gaḍuvaru)* is a large upper-roomed house, with sloping roof in a high-walled enclosure, comprising an area of about a quarter of a mile. "Within this space there is also a well-built magazine, besides several houses—one said to contain a variety of arms and relics taken from wrecked vessels—and a neat building raised on stone arches, from which the ladies witness the games exhibited before the court on festivals."* [See also Pyrard, p. 155.] The shallow moat, 12 to 15 feet broad, which formerly surrounded the Palace walls, is now nearly choked with scrub and rank vegetation. A few brass cannon of small calibre still guard the entrance ("A' l'entrée du Palais..... on void quelques pieces de canon"—Pyrard, p. 155), but are only used for firing salvoes on State occasions. The Palace stands back about 150 yards from the chief gateway through the fort wall on the North.

In the town are two chief, and several minor mosques *(M. miskitu)*: a tower or minaret *(M. munnáru)*, 40 feet high, from which "the faithful" are called to prayer:† a public office for the transaction of revenue and other business: a mint: and a house set apart for the use of visitors or shipwrecked persons.

The town is somewhat regularly laid out with broad streets, straight and long, running in attempted parallel lines, intersected by others at right-angles. It was formerly divided into five municipal wards called "*avares*," each of which had its headman, "*Mouscouly Avare*, l'ancien du quartier." (Pyrard, p. 146.) There are now only four

* Trans. Bombay Geo. Soc. 1836-8 (1844) p. 57.

† Note (2).

such divisions (*M. máḍán*), called respectively, *Galolugé*, *Hemvéru*, *Machchangolí*, and *Máfannu*,—the last containing the Palace. The houses (generally of wattle and daub, or cocoanut thatch) have as a rule a yard or compound attached, where fruit trees and some flowers are cultivated. A *cadjan* fence five or six feet high shuts out all the houses from the road. Apparently only one stone-and-brick-built private house now exists, which is owned by a rich *Didi;* but in Pyrard's day the nobility and richer inhabitants commonly occupied houses built of madrepore (p. 89)—the ruins of some of which were noticed by the Indian Navy Surveyors in 1834-6.* The streets are shaded by a variety of fruit trees, such as cocoanut, breadfruit, biling, areka (rare), plantain, &c., and are neatly kept.

Málé† must contain between 2,000 and 3,000 inhabitants, and has for two centuries at least been over-populated, rendering it even in 1602-7 "la plus mal saine" (Pyrard, p. 89) of all the islands, owing chiefly to the numerous graveyards, which at the present day meet the eye at every turn. Many of the inhabitants are traders, but the most common employments are fishing, gathering cocoanuts, drawing toddy, and collecting cowries. The whole foreign trade of the several Atols is conducted at Málé under regulations imposed by the Sultan. Good water and supplies may be obtained.

There are no soundings to the S. of Málé, but round the inner side of the island the depths are from 25 to 28 fathoms, sandy bottom. *High water* on the F. and C. occurs at Málé at 12 h. 30 m.; rise and fall of *tide* three feet, and sometimes four feet.

(d.) SOUTH MÁLE ATOL is separated from the N. group by *Wádú Channel* [*Wádú kaḍu*] which, though less than 2½ miles wide at its narrowest part, has no soundings at 200 fathoms. Oblong in shape, this Atol is 20 miles in length N. and S., by 12 in greatest breadth. It contains 22 islands, nearly all situated along the E. boundary, but only three, counting 200 persons, were inhabited in 1834-6. None afford good water or supplies. There are safe passages on one, or both sides of nearly all. Inside the Atol the general depths are from 25 to 32 fathoms, sandy bottom, full of reefs and little coral patches not difficult to avoid. South.

6.—ARI ATOL.

(a.) TOḌḌU' ISLAND (lat. 4° 26′ N., long. 72° 56′ E.), situated 5½ miles N. of Rasdú (Ross Atol), is a solitary island at the W. entrance of Kardiva Channel. The reef is steep and safe to approach to within a cable's length of the high trees, which cover the island and make it visible 20 miles from a mast-head. It contained (1834-6) about 250 inhabitants, principally employed in fishing. Possesses good water and some supplies. Toḍḍú Island.

(b.) RASDU' (ROSS ATOL) is a large lagoon reef distant 4½ miles from the N.E. point of Ari Atol, and connected with it by a plateau having soundings of 100 to 140 fathoms. The diameter of this miniature Atol, which is circular, is only 4½ miles. The N. and W. sides are one continuous barrier reef, and the E. side is another, but entrances occur at the N., E., and S. extremes of the Atol. The interior has soundings from 15 to 20 fathoms, but abounds in detached coral patches. Rasdú (Ross Atol).

(c.) ARI ATOL.—This West Atol is situated about 10 miles N. of Nilandu Atol, and to the W. of Felidu and Mále Atols. It is oblong in shape, 48 miles in length N. and S., by 17 miles in E. and W. breadth, and contains some 50 islands, generally small, which lie chiefly along the E. boundary. Except a small space on the S., Ari Atol, in common with those further North, has no continuous barrier reef round it. On the W., N., and E. sides are numerous good passages for ships into the Atol. In the interior the general soundings are 30 to 40 fathoms, interrupted by many large coral reefs not all dry at low-water. The N. extreme of this Atol is in lat. 4° 17′ N., long. 72° 45′ E. Ari Atol.

Between Ari and Nilandu Atols, and W. of Felidu Atol, lies *Ariyadú Channel* [*Ariyadú kaḍu*]. In width 10 miles, with no soundings, it is free from danger.

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* Trans. Bombay Geo. Soc. 1836-8 (1844) p. 108.

† An outline map of Málé, shewing the general position of the old Fort, is annexed. This tracing has been enlarged in the Surveyor-General's Office, Colombo, from Admiralty Chart, 66 *b m* = 0·25—the approximate position of the chief buildings being inserted from memory (Visit, November, 1879). There is said to be a plan of Málé in Charton (*Voyageurs Anciens et Modernes*, Vol. IV., Paris, 1856.)

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7.—FELIDU ATOL.

Felidu Atol.

(a.) FELIDU ATOL, separated on the N. from South Mále Atol by *Fuḷidú Channel* [*Fuḷidú kaḍu*] 8½ miles wide, has a very irregular outline. Its shape has been compared to a gouty foot and leg. This Atol has only 10 islands, of which five were inhabited (1834–6) by a population of 320. The *Atoḷuveri* resided at *Tinadú* near the centre of the deep bight on the Atol's N.E. side. Many openings occur on the S.W., N.W., and N.E. faces: but none on the S. and E. sides, which are one continuous barrier reef. The water of the islands is brackish and unwholesome. Of supplies, a few fowls, turtle, and some fruit are obtainable, and firewood is plentiful. The islands of *Fuḷidú* (lat. 3° 41′ N., long. 73° 24′ E.) and *Rakidú* (lat. 3° 19′ N., long. 73° 27′ E.) mark the N. and S. extremes of this Atol, and *Fotteu* its E. point, or toe.

Waṭṭaru Reef.

(b.) WAṬṬARU CHANNEL and REEF. *Waṭṭaru Channel* [*Waṭṭaru kaḍu*], which separates Felidu and Mulaku Atols by a space of eight miles, has in its centre a circular lagoon reef, four to five miles in diameter, dividing it into *two* deep passages, 2 and 2½ miles wide. The strength of the tides and currents, and the absence of land marks, render both passages dangerous. There is only one entrance into the lagoon, in which soundings give 12 to 20 fathoms, sand.

8.—MULAKU ATOL.

Mulaku Atol.

MULAKU ATOL lies about 20 miles E. of the Nilandu group, and 15 miles N.N.E. from Koḷumaḍulu Atol. It is of irregular form, prominent towards the N.E. and S., but very straight on the W. In length it is 25 miles, and contains altogether 21 islands, nine of which were inhabited (1834–6) by a population of 980. All are on the boundary reefs (most on the S.E. quarter), except *Mulaku*, the largest, which stands nearly one mile within the principal entrance. In the interior of the Atol there are many coral patches, and the depth of the water varies from 28 to 40 fathoms, sandy bottom. Many safe openings occur, chiefly on the W. side. Good water, plenty of wood, and a few supplies can be obtained at *Mulaku* island (lat. 2° 57′ N., long. 73° 35′ E.) The *Atoḷuveri* lived at *Muli* island.

9.—NILANDU ATOL.

Nilandu Atol.

NILANDU ATOL—the most Southerly of those that lie in double rows—is 40 miles in length N. and S., and is in reality *two* Atols, separated by a channel, 3½ miles wide, without soundings.

North.

(a.) NORTH NILANDU ATOL is a perfect semi-circle on the E., but its W. side is rather indented. There are not many islands on its boundary. In the interior, where the general soundings are 25 to 35 fathoms, are four islands, and several large coral reefs dry at low water. *Nilandú*, the S. island (lat. 3° 4′ N., long. 72° 53′ E.), inhabited, affords some supplies and good water. From this island the double Atol takes its name. *Himiti*, the W. island, though small, is important in the group. In 1834-6 it contained 200 to 300 inhabitants, who were great traders and navigators, sending annually five or six vessels (80 to 100 tons burden) to Bengal, and having schools for instruction in navigation.

South.

(b.) SOUTH NILANDU ATOL is of somewhat oval form, flattened slightly on the E. and W. sides. In meridional length it is 21 miles, by 13 miles E. and W. Many passages admit of vessels entering the Atol, but it is least accessible on the S.W. The general depths in the interior are from 27 to 35 fathoms, but studded by many coral reefs, large and small, some dry at low-water and all easily avoided. About 20 islands lie within the Atol: two or three on the W. side boundary: most on the E. boundary reef. A number of jewellers live on the two islands *Ribudú* and *Huludeli* ("Doorais Island"—Taylor's Sailing Directory, Part I., p. 576), and travel periodically among the different Atols in pursuit of their calling. At *Kuḍa-huvaḍú* island (lat. 2° 40′ N., long. 72° 53′ E.) some supplies of wood, water, and poultry can be procured.

It gives its name to *Kuḍa-huvadú Channel* [*Kuḍa-huvadú kaḍu*], a narrow but safe passage, which separates Nilandu Atol from the Koḷumaḍulu group. The W. entrance

is only 10 miles wide. The Atol on the S. (Koḷumaḍulu) is soon past, but the two Atols on its N. side (Nilandu and Mulaku) give this channel a length of over 30 miles.

10.—KOḶUMAḌULU ATOL.

Koḷumaḍulu Atol.

KOḶUMAḌULU ATOL is of somewhat circular form—its greatest measurement from E. to W. being 29 miles, and from N.W. to S.E. 23 miles. It is principally surrounded by barrier reefs, and in the whole circumference there are a dozen openings. There are many islands along the S. boundary: a few on the N.: and in the interior only six. Within the Atol lie numerous coral patches dry at low-water, but the general depths are from 32 to 42 fathoms. The chief islands are *Hirilandú* and *Kaḍudú* (W.), separated by a passage two miles wide, *Véimandú* (S.), *Fálu*, nearly four miles in length (E.), and *Buruni* (N.) in lat. 2° 34′ N., long. 73° 6′ E. From these islands, and some others, good water, firewood, and some poultry, are procurable.

Véimandú Channel [*Véimandú kaḍu*], 25 miles in length N.E. by E. ½ E., and 16 or 17 miles in breadth, divides Koḷumaḍulu and Haddummatí Atols. It may be traversed by vessels at night.

11.—HADDUMMATÍ ATOL.

Haddummatí Atol.

HADDUMMATÍ ATOL. This small Atol, in shape said to resemble a leg of mutton, lies lengthways N.E. and S.W. for 26 miles: its greatest breadth is 15 miles. The boundary reef—more regular in outline than that of any other Atol—has six gateways or openings (*M. kaḍu*), four of which are available for large ships—one on each side of the boundary. Coral patches, not difficult to avoid, stud the interior. Wood, water, and poultry are to be obtained at *Mowa* [? *Mávaru*] (lat. 1° 54′ N., long. 73° 14′ E.), the chief island, at the W. extreme. It contained (1834-6) from 300 to 400 inhabitants, who traded in their own vessels—three or four of 80 to 100 tons burden—to India annually. At the N.E. point of the Atol—the narrow end—stands the large island *Isdú* (lat. 2° 7′ N., long. 73° 35′ E.) two miles in length, and covered with cocoanut trees.

The *One-and-a-half Degree Channel*, comprehending the space between Haddummatí and Huvadú (Suvádiva) Atols, is 50 miles broad, and free from dangers. It is adopted by vessels from the Westward bound to Ceylon, in the months of October and November.

12.—HUVADÚ (SUVÁDIVA) ATOL.*

Huvadu (Suvádiva) Atol.

HUVADU′ (SUVÁDIVA) ATOL, one of the largest of the Máldive group, is 42 miles in length N. and S., by 34 miles in breadth. Fine broad passages into the interior occur on all the sides. There are 30 islands in the centre of this group, which has both a greater depth of water (35 to 40 fathoms) and fewer coral reefs than other Atols. The aggregate population was about 2,000 in 1834-6. The men are principally employed in fishing, whilst the women weave a rush which grows in this Atol (dyed black, brown, and yellow) into the pretty and valued "Máldive mats." The inhabitants of this Atol are said to be much subject to *elephantiasis*.

The chief islands are:—*Hundadu* (lat. 0° 27′ N., long. 72° 56′ E.) at the W. extreme; on the N. end of a barrier reef which is 19 miles in length and forms the S.W. side of the Atol. In 1834-6 it contained 200 inhabitants, and was the residence of the *Atoḷuveri*.—*Mátura*, the Southernmost isle, consisting of a number of little islets on one coral reef.—*Wádú*, about 1½ mile long E. and W. and half as broad, said to have been once a very fertile, thriving island, with 1,200 inhabitants, but contained in 1834-6 not more than 100. Some ancient mosques, and burial places, render the island interesting to the antiquary.—*Gaṇ*, the largest of the group, shows plenty of trees on more than 1½ mile of sea frontage. A fort was erected on this island against the Portuguese in the 16th century.†—*Gaddú*, the principal island of the mat manufacture.—*Máfurhi* at the N.W. projecting angle of the Atol.—*Tenadú* (W.), about one mile in extent, contained 200

* Note (3).

† Gray, J. R. A. S., Vol. X., p. 197, quoting Pyrard.

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inhabitants (1834-6). Good water, wood, and supplies are furnished by most islands. An impassable barrier reef, 11 miles in length, forms the N E. boundary of the Atol; and on its N. and N.W. sides are many irregular detached coral reefs. Some of the royal lineage either voluntarily emigrated, or were banished, to this group, at a former period.* Their descendants, styled *Didi*, still reside there, as well as in the island of Mulaku and Aḍḍú Atol.

The *Equatorial Channel.*—By this name navigators in general know the entire passage between Huvadú (Suvádiva) and Aḍḍú Atols, 46 miles in breadth, but Mulaku island lies athwart the way 31 miles S. of Huvadú Atol, and it is this latter space which properly constitutes the Equatorial Channel. This channel is free from danger.

13.—AḌḌÚ ATOL.

A little to S.E. of the centre of the Equatorial Channel lies :—

Mulaku Island.

(a.) MULAKU ISLAND (erroneously called *Addon Island* by navigators formerly), in lat. 0° 17′ S., long: 73° 23′ E., two miles in length N.W. and S.E. by an average breadth of ¾ mile. The N.E. and W. sides are precipitous, with no soundings close to the beach; but off the S. side a shelving bank extends for 1½ mile, on which the surf breaks very high. The inhabitants are principally employed in fishing and weaving cloth, and numbered in 1834-6 between 300 and 400. They can provide turtle, fowls, eggs, some fruit, firewood, and fresh water.

Aḍḍú Atol.

(b.) AḌḌU′ ATOL (named *Phoolah Moloque* in error by the old navigators) is the South termination of the Máldive chain, and the smallest of all the Atols. It is shaped like a half-moon, concave on the N. side, and is only 10 miles from E. to W., and seven miles from N. to S. There are nine large and several small islands—over 20 in all—which contained 500 persons in 1834-6. The two chief islands are *Hatadú* (N.W.) and *Midú* or *Huludú* (N.E.). *Gaṇ* Island (lat. 0° 42′ S., long. 73° 6′ E.) is the most Southerly of the whole Máldive group. The islands afford a few supplies of fruit, limes, poultry, eggs, &c., and firewood and water in abundance. The natives, though timorous, are civil and obliging, and will exchange their products for money, rice, or provisions. They possess some trading boats—one or two of which visit Ceylon annually—and their principal occupation is making cotton cloth, dyed by themselves white, red, chocolate, and black, neatly blended, which realize a good price in the other Atols.

There are four gateways into this Atol, two on the N., and two on the S. side—the broadest and deepest. No soundings are obtainable outside the Atol, but within the general depths vary from 20 to 25 fathoms.

Defence.

DEFENCE.

The importance of the Máldives in the event of maritime war in Indian seas in which England was involved, might be made considerable. Lying within two to three days' steam of Ceylon and the Coast of Hindústán—and therefore within easy reach of supplies—they could advantageously be selected as a *rendezvous* and temporary station, or as a *point d'appui* for war-vessels destined to harass the marine of the enemy in the East.

History affords at least one instance of the recognition by a European power of the utility of these Islands in time of war. Their admirable position did not fail to attract the watchful eye of the shrewd *Dupleix*, who occupied Málé (Sultan's Island) in 1754 with a detachment of French troops when engaged in the struggle against the English for supremacy in Southern India.

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* Note (4).

Numerous secure roadsteads and landing places abound throughout the group. Supplies are not abundant; but there is no lack of vessels—both large and small craft—and rafts peculiarly suited for navigation and landing troops in the dangerous waters of the Atols.

As far back as 1836 Lieut. F. T. Powell, I.N., proposed *Ihavandú* island, at the head of the Máldives, "as better adapted than any other for a coal depôt. It lies nearly in a direct line between Point-de-Galle [426 miles distant] and Socotra [1,173 miles distant], at about one-third of the whole distance from the former place: is easy of access in every direction: and possesses safe anchorage for ships and steamers in all seasons. During the S.W. monsoon a vessel could anchor at the East side of the island between it and a small reef dry at low water; in the N.E. monsoon the best anchorage is in the channel between the island and the South barrier reef in 16 or 17 fathoms, sand and rock. Opposite both the anchorages there are good landing places for boats, which are procurable for the landing and shipment of coals, &c. The natives, who are civil and peaceable, might, I think, be induced to work for a small hire, such as rice, tobacco, &c., or any other remuneration they might consider adequate."*

Equal facilities exist for the establishment of coal depôts at Kardiva Island *(Kaharidú)* about the centre of the group, and on Suvádiva (Huvadú) or Addú Atols at the South.

Owing to their low-lying nature, the great extent of coast line, and the want of stone suitable for fortification, it may be doubted whether the Islands could be strongly defended except at a cost clearly prohibitive. The old Portuguese fort at Málé is, however, a standing proof of the practicability of erecting fairly substantial works at important points, capable of offering some resistance.

Upon emergencies, a battery of Artillery with one or two companies of Marines, aided by a vessel of war, would probably suffice to hold the Islands against the sudden descent of an enemy's rovers.

Peaceable and timid by nature, but amenable to discipline, there is every reason to believe from their past history that the Máldivians could be relied on at least in defensive operations affecting the safety of their Islands. Though constitutionally lazy, they are likely to prove sufficiently alive to their own interests to co-operate in carrying out ordinary undertakings, if adequate inducement is held out.†

NOTES.

Notes.

(1)

The Atols.

THE ATOLS—of which there are more than twenty physically distinct—have for centuries been divided by the Máldivians into *thirteen* chief groups, forming the entire realm of the Sultans.

"Elles sont divisées," says Pyrard (p. 71), "en *treize* Provinces, qu'ils nomment *Atollons* qui est une division naturelle, selon la situation des lieux: d'autant que chacun Atollon est separé des autres, et contient en soy une grande multitude de petites Isles"; and he proceeds to speak of the Máldive sovereign, "*Sultan Ibrahim*," as "king of 13 provinces and 12,000 islands *(dolos assa ral tera atholon)*." As though this title was not sufficiently pompous, on their coins the Máldive Sultans are described as 'lords of land and sea' (*assulṭánul bar wal bahr*, السلطان البر والبحر)—in other words, 'rulers of the world!' Βριάρεως φαίνεται ὢν λαγώς.

L.val (p. 74) enumerates the Atols "in order from the North" thus:—(1) *Tilla dou matis*, (2) *Milla doue madoue*, (3) *Padypolo*, (4) *Malos madou*, (5) *Ariatollon*, (6) *Malé Atollon*, "qui est le principal où est l'isle de Malé capitale des autres," (7) *Poulisdous*, (8) *Molucque*, (9) *Nillandous*, (10) *Collo madous*, (11) *Adou matis*, (12) *Souadou*, (13) *Addou* and *Poua Mollucque*, "qui en sont deux petits distinguez et separez ensemble comme les autres, mais fort petits, pour raison de quoi ils ne sont comptez que pour un. Toutefois *Addou*, comme le meilleur, donne le nom à l'autre." "These atolls with Suadiva were sometimes considered as a sub-kingdom, apart from the other atolls. The dethroned king *(Dom Manuel)* who lived at Cochin entitled himself 'king of the Maldive islands and of the three atolls of Cuaydu *(rei das ilhas de Maldiva e de tres Patanas de Cuaydu, &c.'—Documento*, 1560.)"‡

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* J. R. A. S., Bengal, Vol. IV., p. 322. † Note (5). ‡ Gray, J. R. A. S. Vol. X., n. s. pp. 196, 200.

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"This division into thirteen Atolls is political rather than physical: thus, *Tilla dou matis* [Tiladummatí] includes what is really the Northernmost atoll, *Heawandu Pholo* [Ihavandiffoḷu], and does not include *Mille doue Madoue* [Miladummaḍulu], though both form one long straggling Atoll intersected by no deep soundings. *Malcolm Atoll* (so called by the English surveyors) is taken to belong to *Mille doue Madoue: Horsburgh Atoll* to *Malosmadou* [Máḷosmaḍulu—itself consisting of two Atols]. *Malé* [Múle] has three Atolls; *Ari*, [*Nilandu*], and *Addou*[Aḍḍú] each two."*

Ibn Batuta (middle of 14th century) gives the following as among the provinces (Arabic, *aklim*) which are distinguished:—(1) *Pâlipour*, (2) *Cannaloûs*, (3) *Mahal*, 'which gives its name to all the islands,' (4) *Télâdib*, (5) *Carâïdoû*, (5) *Teïm*, (7) *Télédomméty*, (8) *Hélédomméty*, (9) *Béreïdoû*, (10) *Candacal*, (11) *Moloûc*, (12) *Souweïd*.†

"The French Editors identify [some of] these names with those given by Pyrard as follows:—*Pâlipour*—'Padypólo': *Mahal*—'Malé': *Carâïdoû*—'Caridou': *Télédomméty*—'Tilla dou matis': *Hélédomméty*—'Milla doue madoue': *Béreïdoû*—'Poulisdous': *Moloûc*—'Moluequé': *Souweïd*—'Souadou.' The *Cannaloûs* of Ibn Batuta, they add, is perhaps the 'Collomadous' of Pyrard, or, as Hórsburgh writes it, 'Colomandous.'"‡

The majority of the above "are easily recognisable," but five (viz., *Cannaloûs*, *Télâdib*, *Teïm*, *Hélédomméty*, and *Candacal*) present more difficulty,—some, indeed, being shaped, *more Arabico*, out of all but unsatisfactory conjectural recognition.

As regards *Hélédomméty*, the French translators would appear to be at fault. It may perhaps with more reason be taken as equivalent to *Hela-du(m)-mati* (S. *hela*, හෙළ, 'white,' or even *sela*, සෙල = Javanese *sela*, 'rock' + *dúva*, දිව, 'island' + *maṭu-piṭa*, මතුපිට 'above') passing by contraction into *Had-dummati*. *Aḍḍu* may similarly be a contracted form of *Hela-dú* or *Hulu-dú*—the name of one of the islands in that Atol.

If it be open to question the orthography of the MS. and, supposing an error of the copyist, read *Nélâdib* for *Télâdib*—*t* and *n* are not unlike in Arabic—it can be at once fitted to *Nilandu* Atol. Even accepting the received form as correct, the identification may possibly be not considered too far-fetched. Cf. *Tojarce* = ? *Nausâri*; *Accance* and *Kalufice* islands (Lakkadive group) = *Aucutta*, *Kalpeni*, Adm. Chart. (Col. Yule in Indian Antiquary, Vol. III., pp. 212–1, on "Names in the *Tohfat-al Majâhidin*.") *Nilandu* may, however, perhaps = 'the lotus island' (S. *nelum*, නෙළුම්, 'lotus' + *dúva*, දිව, 'island'; but cf. also *Pulo-nila*, 'indigo' or 'blue island' in the Moluccа Sea.

To attempt to twist the rest into probable coincidence with the modern names of the remaining Atols seems hopeless. But the identification of *Carâidoû* with *Caridou* [*Kaharidú*]—if accepted—suggests a likely clue to their origin. Admitting that this island—now-a-days of comparative insignificance—was of sufficient importance in the 14th century to be classed as a "province," it is not improbable that other islands would have been taken as representative of whole groups or Atols.

Télâdib, if not *Nilandu*, might then be *Toḍḍú*, on the analogy of *Haddummáti* from *Hélédomméty*: *Cannaloûs—Kinaḷos*, 'Kenoorus,' Admiralty Chart, (Máḷosmaḍulu Atol): *Candacal—Kedikoḷu*, 'Kaindecolos,' Admiralty Chart, (Miladummaḍulu Atol). *Cannaloûs* and *Teïm* should lie *North* of Múle. Ibn Batuta, crossing from the Malabar coast, landed first at the former, "an island fair to behold, where there are many mosques," and touched later at *Teïm* "after four days' cruise" when bound for *Mahal* (Málé).‡

The ephemeral prominence that individual islands may assume is well illustrated by Pyrard. Thus he particularises *Maconnodon* [*Makunudú*, Múle Atol] the property of the "High Admiral": *Misdoue* [? *Midú*, Nilandu Atol] and *Gooradou* [*Gurádú*, Fádiffoḷu Atol] where a former Sultan's brother-in-law, and a powerful chieftain, respectively raised the standard of revolt at different times: *Game* [*Gaṇ*, Huvadú Atol] on which a fortress was erected: *Maspillaspoury* ['the city of the Mápiḷḷa (Moplas)'? *Máfurhifaru*, Miladummaḍulu Atol.]

Many of the names occurring throughout the Máldive Archipelago are of simple explanation, and find their counterpart in Ceylon (North and South), and on the South Coast of India: of others—some apparently heterogeneous compounds—it would be premature to offer more than a possible solution. Pure Aryan derivatives prevail, but the Dravidian element is not absent. Of words chiefly recurring as terminations, the following are most common:—

(a.) M. *dú*; S. *dúva*, *diva*, දිව, දිව; Sans. *dwípa*.

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* Gray, J. R. A. S., Vol. X., n. s. 1878, p. 196, Note 1.

† *Voyages d'Ibn Batoutah* par Defrémery et Sanguinetti, IV., 111, 112, (2° tir.) Paris, 1879; Gray, J. R. A. S., Vol. X, n. s. 1878, p. 196, Note 1.

‡ Gray, Translating from *Voyages d'Ibn Batoutah* par Def. et Sang., IV., 455.

(b.) M. *farhi, fujja, fulu, folu,* and *kolu;* S. *pitiya,* පිටිය ; T. *pattanam,* பட்டணம், *palli,* பள்ளி; Sans. *pattana, palli;* but cf. Malay *pulo,* 'islet.'

(c.) M. *faru, varu, hura;* S. *pura,* පුර ; T. *puram,* புரம், *chéri,* சேரி, *úr,* ஊர்; Sans. *pura.* But with M. *varu* cf. also Sans. *vára,* 'multitude,' and *váta* 'enclosure,' 'district' (*e. g. Márwár*).

(d.) M. *maḍulu;* S. *maṇḍalaya,* මණ්ඩලය ; T. *maṇḍalam,* மண்டலம்; Sans. *maṇḍala.*

(e.) M. *atolu;* S. *ṭuḷa,* ඇතුළ, 'inside.'

(f.) M. *kaḍu,* 'channel,' 'sea' cf. (i) T. *kaḍi,* கடி. 'to cut;' (ii) T. '*kaḍal,* கடல், 'sea.'

If Pyrard is right, *Tiladummati* is a hybrid ("commençant à la pointe du Nord, qui en est la teste, que les Portugais appellent à cause de ce *Cabexa des las ilhas,* et en langue Maldivoise *Tilla don matis* en meme signification, c'est à dire la pointe d' enhaut"—p. 74) from Mal. *tala,* T. *talai,* தலை, 'head,' or T. *tolci,* தொலை, 'limit,' 'end,' and S. *dúva,* දිව, 'island,' + *matu-piṭa,* මතුපිට, 'above.' Compare *Taleimannár* (N. Province, Ceylon); but also *tala,* (Sans. Mar.) 'low ground.'

Miladummaḍulu and *Kaharidú* may be equally conglomerates:—*mila du(m)maḍulu* = T. *mullai,* முல்லை, + S. dúva, දිව, + S. T. maṇḍalaya, මණ්ඩලය, maṇḍalam, மண்டலம்; *kahari* = T. *kárai,* கரை, + S. dúva, දිව. Cf. *Mullaitivu* (N.E. coast, Ceylon) and *Káraitivu* (Amsterdam Island, N.W. coast, Ceylon).

Máḷosmaḍulu—perhaps = 'the country of the large *ḷos* (M.) tree.'

Fádiffolu (Ibn Batuta, '*Pálipour,*' Pyrard, '*Padypolo*')—compare *Pulas-ti-pura,* the modern *Polonnaruwa,* (Ceylon) and *Pudupaṭṭanam* (on the Malabar coast) the Πουδοπάτορα of Ptolemy and Πουδοπάτανα, of Cosmas Indicopleustes (Caldwell, Dravid. Gram. 1875, p. 105.)

Mulaku—probably another form of *Máliku* (Minakaï) the *Mulkee* of the *Tohfat-al-Majáhidin* (Ind. Ant. Vol. III., p. 213). Cf. Mar. *Mulúk* 'kingdom' *Málaka,* (Malacca), and *Maluka,* Port. *Maluca* (Moluccas).

Koḷumaḍulu—Cf. *Chola* (Sans.), *Chóṛa* (T.) or *Chóḷa* (Tel.)—*maṇḍala,* 'the country of the Chólas, Chóḷas, or Chóṛas, whence *Coromandel.*

It remains to notice that the natives customarily affix the term *atoḷu* only to the Atols *Mále, Ari, Nilandu, Felidu,* and *Mulaku,* shortening their final vowel, or even, as in *Mulakatoḷu,* altogether eliding it, and appear to use *maḍú* or *maḍulu* synonymously, as *Miladummaḍú* or *Miladummaḍulu,—Koḷumaḍú* or *Koḷumaḍulu.*

(2)

"The Muezzin's call doth shake the minaret:
'There is no god but God!—to prayer—lo! God is great!'"

Ces quatre Moudins [*M. Mudimmu*] montent tous ensemble sur un bastiment de pierre fort haut élevé; qui est tout joignant le Mesquite [*M. Miskitu*]. Ils mettent les mains à leur oreilles, et ils crient par trois fois de toute leur force, d'une voix effroyable tous ensemble, ces paroles en langue Arabesque, *Alas Alas aquebar* [*Allah*—pronounced *Allāhŭ—akbar:* should be repeated *four* times] c'est à dire *grand Dieu:* et puis adjoustent quelque chose de Mahomet." (Pyrard, p. 98.)—See Stobbart, 'Islam,' 1876, p. 117.

(3)

Huvadu (Suvádiva) Atol.

HUVADU' (SUVÁDIVA) ATOL.—The following recent notes regarding the islands of *Viligili, Tenadú,* and *Hitadú,* in this Atol, made, at request, by the Captain of the S. S. "*Consett*" (wrecked on the Suvádiva reef, May 7th, 1880), are of interest:—

"The population of the three islands, which are small, is about 1,000. The inhabitants live within small *kraals,* each containing an indefinite number of huts. These huts are built of sticks, thatched and covered with *cadjans,* are low, and small (about 7 feet by 9). The natives were very obliging, kind, and friendly, did not seem ignorant, having books of their own languages [probably treatises on the *Kurán*], but were extremely inquisitive. Those who have been abroad to Calcutta, Ceylon, &c., can speak a little Hindústání, Arabic, and Siṇhalese. The supplies obtainable are dry fish, fish blood, fowls, eggs, cocoanuts, breadfruit, and jaggery. The manufactures consist of coir yarn and rope, finest fancy rush mats, fans, and tats. Trade is done mostly by barter, though cowries and Máldive copper coins are in circulation. Prices could not be ascertained, as provisions were obtained *gratis,* and were freely given.

"The island of *Viligili* is one of the most cleanly kept islands ever visited. The inhabitants are very industrious, civil, and obliging. The women are extremely shy and bolt like antelopes [*sic*] at the sight of Europeans. Their costume is pretty, and resembles that of Arab or Persian women. The morality is good. Children are taught to learn their own dialect from a young age. The men are noted for their power of *sástras* (magic), and the whole race is very superstitious. The climate is unhealthy for European constitutions. Fever and bowel complaints are the chief disorders prevalent, probably due to the brackish water. From India and Ceylon are imported

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silk and cotton goods, rice and other grains, medicinal roots and drugs, and such luxuries as tea and sugar. It was noted that some men understood the intrinsic value of English money, and accepted it in exchange for goods."

(4)

"C'est le lieu où le Roy envoye en exil ceux qui luy ont déplcu, d'autant que c'est une isle fort éloignée de sa Cour, où les navires estrangers n'abordent jamais, et dont les habitans sont fort peu courtois, fort rudes et grossiers. (Pyrard, pp. 68-9.) Accordingly three of Laval's companions were deported to "*Souadou*" [*Huvadú*] to prevent concerted plans for escape (p. 69); and he further mentions (p. 176) that the Sultan's mother-in-law and her brother were mutilated ("ils eurent tous les poings coupez") and banished thither for high treason.

Suvádiva Atol was ever a favourite 'penal settlement.' Ibn Batuta (A.D. 1343-4) mentions the banishment to "the islands of *Souweïd*" of '*Abd-Allah* by his step-son, Sultan *Chihâb-ed-dîn* [*Shihâb-ul-dîn.*]* The present Sultan's grandfather (*Sulṭán Hassan Núr-ul-dîn*) is also said to have been temporarily banished (1790?) to this Atol, and, on obtaining the throne, to have similarly retaliated upon the relations of the Sultan whom he succeeded.

See too Pyrard (p. 170) regarding the voluntary exile of two Máldive nobles (ultimately joint Sultans) who, "unwilling to submit to the Portuguese yoke," retired to Huvadú Atol, where the enemies never dared venture, and defied their arms.

(5)

Defence.

DEFENCE.—The question of the potential capabilities of the Máldive group, as of possible future service to the Imperial Government on military and commercial grounds, assumes the more interest at the present time from the recent official inspection of *Diego Garcia* (lat. 7° 26′ S., long. 72° 23′ E.), the principal island of the Chagos Archipelago (*Basses de Chagos*), lying above 400 miles directly South of the Máldives.

The surveyors' report has yet to be published; but meanwhile the following extracts from the notice by the local press of the visit of H. M. "Eclipse" bear so closely on the above remarks, as to warrant insertion:—

....."The examination of the harbour itself and its shore showed that there was deep water throughout and most suitable localities for *coal depôts* as well as commanding positions for the erection of one or more *batteries*.† It is of course natural that the Government in establishing a depôt of coal for the Navy would desire to have it protected from robbery, and no doubt private steam companies connected with the Australian lines, viâ the Red Sea, would likewise be glad to coal their steamers here, seeing that it is in the direct line to the South, instead of going out of their way for other coaling stations. *We believe it is understood that one battery and a small force of Artillery, with a company of Infantry, would amply suffice for all purposes of protection.*" —*Ceylon Times*, July 13, 1881.

"The opening of the Suez Canal and the consequent rapid development of steamer traffic between Great Britain and Australia has naturally directed attention to this group, lying, as it does, in the direct passage between the Red Sea and Australia, and the "Eclipse's" mission may be looked on as a harbinger of Diego Garcia becoming a large coaling station, and, consequently, obviating the necessity which at present exists for steamers to Australia proceeding directly out of their course to Point-de-Galle for coals. A lighthouse placed on Diego Garcia would be of great service to ships outward bound to India and Ceylon, and an important landmark for the correction of their chronometers, when making the South passage to the Persian Gulf and Red Sea during the prevalence of the South-West monsoon. The harbour of Diego Garcia is admirably adapted for a *coaling station*, being large, well protected from the prevalent winds, and uniformly deep, except at certain portions where coral reefs have arisen.....It seems quite impracticable to entertain the idea of making it a strongly fortified depôt, except at an enormous expense, as, although the harbour would admit of being strongly fortified, the extreme narrowness and length of the island would allow of its being attacked and taken in the rear by a hostile squadron, unless the whole of its coast line were defended by a succession of forts which would have to be erected at an enormous expense and heavily garrisoned.....The fact of a British man-of-war being sent to enquire into the feasibility of an almost unknown island being made into a large coaling depôt may be taken as an assurance that the Admiralty are becoming alive to *the necessity of establishing some large stores of coal, properly defended by fortifications, from whence we might draw a supply in war time*, instead of being to a large extent dependent, as in the case at present, on neutral States for our supplies."—*Ceylon Examiner*, July 8, 1881.

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* *Voyages d'Ibn Batoutah* par Def. et Sang. IV., 131.

† Vide *ante* p. 4, Note (3).

IV.—HISTORICAL SKETCH.

1.—EARLY PERIOD.

"THE story of a people who have no history can only be gleaned from the records of strangers, who have settled among them, or by an examination of their own language."*

The early history of these Islands is buried in obscurity—the natural result of their complete isolation and comparative insignificance. Indeed, except for scant glimpses afforded by the accounts of a few casual travellers, whom accident has taken thither from time to time, the world, in this the latter half of the 19th century, knows little or nothing of the whole past history of the Máldives. The Máldivians themselves possess no known historical records of any antiquity,† and would seem to be utterly ignorant of their antecedents, beyond such vague and unreliable shreds of information as may have been handed down by tradition.

Origin of race.

It is difficult, perhaps impossible, to state with certainty the exact origin of the Máldivian race. There can, however, be little doubt that the whole group—including *Maliku (Minakai)*‡—was occupied either directly from Ceylon, or about the same time as this Island, by a people of A'ryan stock and language. This supposition is greatly supported by the known kinship between the Máldive and Siṇhalese languages.

Gradually, from contact and intercourse with strangers of the coasts of India—chiefly Malabar Mápiḷḷas—the influx of pure Arabs, and the occasional importation of African slaves, many characteristics of the original type have been modified. More particularly is this the case in the Northern Atols, which have necessarily been more exposed to foreign influence than those lying further South.

When colonised.

"'They' [the natives], says Pyrard (p. 78), 'hold that the Maldives were formerly peopled by the *Cinyala*, for so the inhabitants of Ceylon are named; but I find that the Maldivans do not at all resemble the *Cinyala*, who are black and ill-shapen.§ The former are well-shaped and proportioned, and differ but little from ourselves, except in their colour, which is olive. Yet it may be believed that the climate and lapse of time have rendered them more fair than were those who first colonised the islands.' "‖ "Added to the fact," he continues, "that there is incorporated a large number of strangers from all parts, who have settled there, besides many of the natives of India *(Indiens)*, who have been wrecked from time to time, as we were, and who are constantly being cast away there and remain. On this account the inhabitants [of the islands stretching] from *Malé* and its vicinity up to the Northern limit prove to be more polished, courteous, and civilised." "Again (p. 185): 'They say that the Maldives began to be inhabited only about 400 years ago [*circa* A. D. 1200], and that the first who came and peopled them were (as I have already said in passing) the *Cinyalles* of the Island of Ceylon, which is not far distant, and were idolaters, but have since changed their religion.' "‖

Mr. Gray seems right in conjecturing that "if the Siṇhalese were the first colonists, they were probably there as far back as the beginning of the Christian era, when Ceylon was a powerful monarchy." It can hardly have been much later than this period that *Eḷu* (the pure Siṇhalese) was the vernacular of Ceylon, unadulterated by Sanskrit and Páli infusions. And it is to this form of Siṇhalese that the Máldive language approaches nearest. Indeed it may be preferable to assign to the original colonisation of the group a date synchronic with that of Ceylon itself (viz., several centuries before the Christian era) by a distinct isolated party of the same A'ryan adventurers, and to presume a subsequent direct immigration from this Island.¶

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* Crawfurd, Dictionary of the E. Indian Islands, 1856, p. 17. † Note (1). ‡ Note (2).

§ Gray fancies that Pyrard could only have seen the *Tamils* of Ceylon.—J. R. A. S. Vol. X. n. s., pp. 178, 183.

‖ Gray, J. R. A. S., Vol. X. n. s., p. 177.

¶ According to the *Dipawansa, Rája Ratnákara, &c.*, Ceylon bore the name '*O'jadípa*' during the time of Kakusanda, the first Buddha of the present *kalpa* or period, the commencement of which cannot be fixed for want of historical data. At the present day this Island is called by Máldivians "*Oḷudú-kara*" (cf. S. ඕදු කර *múdu kara*, and T. கரை *karai*, 'sea-shore'.)

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Early references to the Islands.

Among the general allusions to the islands lying off the coast of Ceylon by the early travellers and geographers whose writings have as yet become known to the world,* some at least may reasonably be taken to include the Máldives, though specific mention of these Islands scarcely once occurs. Nor is this surprising, in spite of their central position in the track of the trade with India carried on by the Greeks and Romans, and later by Persians and Arabs, considering the uncoveted nature of their products, their unfertile soil, and, above all, the dangers of navigation among the coral reefs—those mythical 'loadstone rocks,' the dread of Ceylon seas—added to the deadliness of the climate, all of which would combine to cause the Máldive and Lakkadive archipelagos to be carefully shunned.

Pappus

In any case "the date given by Pyrard must be put back several centuries."† "*Pappus* of Alexandria (about end of the 4th century) says :—'It [Taprobanê] is one of the largest islands in the world, being 1,100 miles in length by 1,500 miles broad, and reckons 1,370 adjacent islands among its dependencies,'"‡—probably following *Ptolemy* (A.D. 160) who places before Ceylon a group of 1,378 islands (Geog. VII. c. iv. p. 213).

Scholasticus

About the same time (*circa* A.D. 400) *Scholasticus* the Theban,§ who visited India in company with a priest and reached Muziris (Cranganore) on the Malabar coast, mentions the thousand islands, Maniolae (Μανιόλης), and the loadstone (μαγνῆτις) rocks which attract iron-bound vessels to their destruction. Lt.-Col. W. H. Sykes‖ and Sir E. Tennent¶ identify these islands with the Máldives, but Ptolemy, who limits their number to 10, throws them forward some degrees East of Ceylon (Geog. VII. c. ii. p. 21.)

Fah-Hian.

Fah-Hian (in Ceylon A.D. 412) records :—"On every side [of '*Sse-tseu-kouo*'= *Siṇhala*] are small islands perhaps amounting to 100 in number. They are distant from one another 10 or 20 *li*, and as much as 200 *li*. All of them depend on the great island. Most of them produce precious stones and pearls"**—a description which, it must be admitted, applies more naturally to the islands closely skirting Ceylon, chiefly round the North coasts, than to the distant Máldives as supposed by Landresse†† and Tennent.

Kosmas.

Kosmas Indicopleustês (*circa* A.D. 535), on the information of Sopater who had visited Ceylon 30 years previously, says :—"Around it [Σελεδῖβα: Ταπροβάνη] there are a multitude of exceedingly small islets. All contain fresh water and cocoanut palms (ἀργέλλια; Sans. *nárikela*; Arabic, *nárghyl*). These islands lie as close as possible together."‡‡

The early political dependency of the Máldives on Ceylon may be doubted. It must at least have been merely nominal, unless it existed in those 'palmy days' of Hindú legend when *Śrí-Laṅká-pura* (long. 75° 53′ 15″ E.)—the prehistoric capital of the kingdom of Laṅká—remained unsubmerged by the ocean which now rolls far to Eastward of its computed site.§§ It is otherwise difficult to account for the total silence of the chief

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* Early Chinese historical literature particularly offers still a vast unexplored field of likely value.

† J. R. A. S. Vol. X. n. s. 1878, p. 178.

‡ Tennent, Ceylon, 1860, Vol. I., p. 571, note, quoting Moses Chorenensis, edit. Whiston, 1736, p. 367.

§ A contemporary of Palladius, Bishop of Helenopolis in Bithynia, and quoted in the tract "*De Moribus Brachmanorum*," and its Greek version "Περὶ τῶν τῆς Ἰνδίας ἐθνῶν καὶ τῶν Βραγμάνων;" *Pseudo Callisthenes*, edit. Müller, Lib. III. c. vi., vii.—Tennent, Ceylon, Vol. I., pp. 562-3.

‖ J. R. A. S. Vol. VI. o. s. 1841, p. 393.

¶ Tennent, Ceylon, Vol. I., p. 563, Note 2.

** Beal, Buddhist Pilgrims, p. 148, quoted by Gray, J. R. A. S. Vol. X. n. s., p. 178. Five *li* (1643 *mètres*) are a little more than an English mile (1,069 *mètres*)—Stanislas Julien, "*Mémoires sur les Contrées Occidentales*," Tome II. p. 259

†† *Foë-kouë-ki*, translated by Remusat, ed. by Klaproth and Landresse, Paris, 1836, English Trans. by J. W. Laidlay. Calcutta, 1848, p. 332.

‡‡ Tennent, Ceylon, Vol. I., p. 567.

§§ "[Eustathius], the scholiast of Dionysius, (translated) thus speaks :—'Others on the contrary have it, that Maldivia was originally one vast island, but that a resistless ocean burst in upon it far and wide, and formed a countless number of islets (νῆσους ἀπειρέσιας)'"—Pridham, Ceylon, &c., 1849, Vol. I. p. 17; Forbes, Eleven Years in Ceylon, Vol. II. p. 259. See too *ante* p. 3, Note (1).

Siṇhalese historical books regarding these Islands.* Certainly at a later period among the territories claimed as subject to the Rájás of Ceylon the Máldives are not included ;† and even in the 4th century the "*Diri*"—probably 'the Islanders' of the Máldive (M. *Divehi mihun*) and Lakkadive groups—are distinguished from the "*Selendiri*," or 'Ceylonese,' by Ammianus Marcellinus, in his account of the Indian embassy to the Emperor Julian (A. D. 361.)‡

2.—ARAB AND PERSIAN PERIOD.

Arab enterprise.

The spirit of enterprise and trade had led the Persians and Arabs to the far East very early in the Christian era. Within a few centuries were added the burning ardour of propagandists and the ambition of conquerors. "The enthusiasm inspired by Mahomet converted the Arabians into a nation of military apostles, whose successive conquests furnished a succession of armed proselytes sufficiently numerous to extend and confirm their empire, and at the same time to engross the entire commerce of Asia: their commercial navy was spread over the whole expanse of the Indian Ocean, and its shores were generally covered by their factories, and subject to their influence."§ In the inlands that lie scattered in this Ocean their success was particularly rapid. "The want of commerce procured them the best reception both from Princes and their subjects. They soon rose to the highest dignities in these petty States, and became the arbiters of government. They took advantage of the superiority of their knowledge and the support they received from their country to establish a universal dominion. The despots and their vassals, in order to ingratiate themselves with them, abandoned a religion to which they had no great attachment, for new opinions which might procure them some advantages. This sacrifice cost them the less, as the preachers of the Koran made no scruple of admitting ancient superstitions into an alliance with those they wished to establish."‖

Their trading settlements.

The Muhammadans first made their influence felt in Southern India and Ceylon—if their traditions be held reliable, possibly as early even as the 8th century—by planting many trading emporia on the coast ¶ On Ceylon, Maṇṇár and "Mantotte" (Mántai)—as on the Malabar coast, Calicut—appear to have been the chief entrepôts of traffic for the Moorish merchants, who received from agents at various ports the produce of different parts of the East.**

Máldivians converted to Islám.

The Máldives, lying in the direct route to Malacca and China, must soon have shared their attention. Peaceable 'squatting' of "Moors" from all parts, in annually increasing numbers, countenanced by successive autochthonous Sovereigns, would be followed naturally by a gradual process of intermarriage with the natives, and smooth the way towards the firm establishment on the Islands of the faith and power of Islám.††

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* No mention of the Máldive Islands occurs in the *Dípawaṇsa*, *Maháwaṇsa*, *Thúpawaṇsa*, *Rája Ratnákara* or *Rájáwali*, nor, it is believed, in any of the older Siṇhalese poets.

† *E.g.*, titles of Rája Siṇha II. (1632-1687):—"Syn tytel was Raya Singa, Keyser van het Eyland Ceilon; Konink van Kandy, Zaitavaca, Cota, Danbadaon, Amorayapore, Jaffanapatnam; Prince van Ove, Mature, Dinavaca, de Vier Provintien; Groot-Hartogh van de Seven Provintien; Grave van Cotiar, Batacalo, Vitana, Panoa, Putelaon, Bellingamma, Gale; Marquis van Duranura, Rotemira, Tinipana; Heer van de Havenen van Ceylon, den Peerl-visschery, en van de Gulde Sonne."—Wouter Schoutens, *Oost-Indische Voyagie*, Tweede Boek, 311, 3rd ed. Amsterdam, 1745. See also Dutch Records (Colombo) 17th century *passim*.

‡ Perinde timore ejus adventus ..... legationes undique solito ocius concurrebant .....nationibus Indicis certatim cum donis optimates mittentibus ante tempus *ab usque Divis et Serendivis* (XXII. L. 7, c. 10 §.)—J. R. A. S, Vol. XIX., o.s., 1862, p. 274.

§ Quarterly Review, Vol. VIII, 1812, p. 118.

‖ History of the Settlement and Trade of the Europeans in the East and West Indies, translated from the French of Abbé Raynal by J. Justamond, Vol. I., Book i., p. 49, London, 1776.

¶ See Tennent, Ceylon, Vol. I, p. 631.

** Sir A. Johnston, Transactions R. A. S., Vol. I., Art. 32.,* 1827.

†† "Inde *a seculo Hedschrae secundo* Arabes Muslemi Indiam peragrarunt superiorem, mediam, et inferiorem, sedesque ibi fixerunt: et non solum libera mercatura, *sed etiam sacris, legibus, institutisque* patriis usi, mox in oris maritimis Indiae ingentem in numerum congregati sunt. Ipsi Indorum principes

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From Ibn Batutá's narrative it is reasonable to deduce the approximate date of the Muhammadan conversion of at least the Northern Atols, including Málé, viz., about the beginning of the 13th, or close of the 12th century. Pyrard, indeed, writing *circá* A.D., 1611, records the native belief that "about 150 or 200 years at most [have elapsed] since they received Mahometanism through the Moors and Arabs, who, while trading over all the continent and islands of India, brought there also their law, which has since remained in most of those parts."* But, allowing for the slowest rate of progress southwards, the most distant group would not escape the "accursed and false doctrine of Mahomet," for so long a period as from two to two and-a-half centuries, *i.e.*, until A.D., 1400—1450.†

Influenced by Malabar States.

Everything points to a close connection at this time between the Máldives and the flourishing and powerful Muslim settlements on the Malabar coast, notably Cananore, not improbably resulting in a feudatory subjection of the Islands to that State during the course of the 14th and 15th centuries. At any rate their proximity and defencelessness could not fail to induce frequent incursions by the restless coast pirates, rendering the sway of the native Kings qualified and precarious. The commercial prosperity and political influence of the Moorish traders, which attained their highest degree in the 12th and 13th centuries, remained considerable until the end of the 15th century, at least, when they were destined to wane and finally disappear before the all-absorbing powers of the West, heralded by the Portuguese.

During this period notices of the Máldives occur in the accounts of a few Arab and Persian travellers.

Two Muhammadans.

In the travels of *The Two Muhammadans*‡ (9th century) allusion is made to the "many islands" [*Dybadjat*] lying between the seas of Herkend and *Delarosi*, which were then "governed by a Queen" and "all inhabited." The wealth of the inhabitants, who were "skilful in all workmanship," consisted in shells (*kaptage*), of which the treasury was full, whilst "ambergris in lumps of extraordinary bigness, as also in lesser pieces resembling plants torn up," was found in the surrounding seas.

Albyrúny.

Albyrúny (11th century) again calls the Islands "*Al Dybadjat*," alludes to their alleged gradual upheaval and disappearance, and divides them into two classes according to the nature of their chief products,—"*Dycah-kouzah*," (Cowry Islands,) "from the cowries which are collected on cocoanut boughs placed in the sea," and "*Dycah-kanbar*," (Coir Islands.)§

Ibn Batúta.

Ibn Batúta,‖ the Maghrabin traveller, crossed to the Máldives (*Dhibat al Mahal*) from the continent of India about the commencement of A.D. 1343, and remained at Málé (*Mahal*) 18 months. Connecting himself with the noblest families by marrying four wives, he rose into great consideration, had pressed upon him the office of Kázi (*Fandayarkiloú*), but ultimately deemed it prudent to leave in order to escape the jealousy of

hand pauci, Calecuti Samorinus, Reges Cambajae, Hinauri, Maabari, *et insularum Maldivarum Radscha*, Islamismum amplexi, Arabum leges et mores suis in terris divulgarunt ..... *Primo mercatum instituerunt singuli, mox propagando Islamismo operam navarunt denique rerum publicarum administratione potiti sunt.*" - Kosegarten, *De Mohammede Ebn Batuta*, p. 4, Jena, 1818.

* Gray, quoting Pyrard, p. 185.—J. R. A. S. Vol. X. n.s., 1878, p. 177.

† See Note to section V. on the "Date of the Muhammadan conversion."

‡ "As to the first of these Voyages ..... it appears clearly that it was written [by Suliceman, the Persian traveller] in the year of the Hegira 237 (A.D. 851). The latter, which is no more than a commentary or discourse upon the former, appears to have been the work of Abu Zeid [on the authority of Ibn Wahab, who travelled in A. H. 157 or A.D. 870] about the year of the Hegira 303 (A.D. 915)."—Pinkerton, "Voyages and Travels," Vol. VII., pp. 181-2; Gray, J. R. A. S. Vol. X. n.s., 1878, pp. 178-9, quoting Reinaud, "*Relation des Voyages faits par les Arabes, et les Persans dans l'Inde à la et Chine dans le* IX.e *Siècle.*"

§ Reinaud, "*Fragments Arabes et Persans inédits relatifs à l'Inde antérieurement au* XI.e *Siècle.*" Paris, 1845, pp. 93, 123-4.

‖ "Ibn Batouta," says Burckhardt ("Travels in Nubia," App. III., 534), "is perhaps the greatest land traveller who ever wrote his travels." His proper name was Abú'Abd-Allah Muhammad. A native of Tangiers, he travelled for 30 years —*i.e.*, from the year 725 of the Hijra (A.D. 1324) to 755 (A.D. 1354). In the course of that period he several times traversed Egypt, Syria, Arabia, Persia, the coast of the Red

the Sultana's second husband, *'Abd-Allah*, who was also Chief Vizier. He describes in considerable detail the condition of the Islanders and their administration (which he honestly set himself to ameliorate), gives the quaint legend of their conversion to Islám, and specifies the export trade "to India, China, and Yemen" in dried fish *(koulb almás)* cocoanuts, fabrics, cotton turbans, cowries *(ncada')*, coir *(kanbar)*, and even copper vessels. Cowries formed the currency.

A.D. 1343-4.

Owing to failure of male issue, the eldest sister of the late Sultan had succeeded to the throne. "One of the marvels of the Máldives is that they have for their sovereign a woman, by name Khadîdjah [KHADI'JAH], daughter of the Sultan Djélâl eddîn 'Omar [JALÁL-UD-DI'N 'UMAR], son of the Sultan Salâh eddîn [SALÁH-UD-DI'N] Sâlih Albendjâly. The kingdom had at one time been possessed by her grandfather, then by her father, and, when the latter died, her brother Chihâb eddîn [SHAHÁB-UD-DI'N] became King. He was a minor, and the Vizier 'Abd-Allah, son of Mohammed Alhadhramy, espoused his mother and assumed authority over him ..... When Chihâb eddîn attained full age he ousted his stepfather, 'Abd-Allah, and banished him to the islands of Souweïd. He was then left in sole possession, and chose as Vizier a freedman named 'Aly Calaky [? *'Alí-Kalége*] whom he deposed at the end of three years and banished to Souweïd."* To his scandalous profligacy Shaháb-ud-dín owed his own subsequent deposition, banishment "to the province of Hélédoutény" [? Haddummatí Atol], and violent death.

"There then remained of the royal family only the sisters of the deceased—Khadîdjah, who was the eldest, Miryam [*Maryam*], and Fathimah [*Fátimah*]. The natives raised to the throne Khadîdjah, who was married to their preacher, Djémâl eddîn [*Jamál-ud-dín*]. The latter became Vizier and Prime Minister, and promoted his son Mohammed to the office of preacher in his own stead; but orders were promulgated only in the name of Khadîdjah."† After the death of her first husband, the Sultana Khadîjah married 'Abd-Allah, who had been recalled from exile. The army of this queen consisted of about 1,000 men of foreign birth, though some of the soldiers were natives.

A.D. 1350-1500 *circa.*

Between Ibn Batúta's visit and the advent in Eastern seas of the Portuguese—an interval of a century and a half—the history of the Máldives is as yet a blank page, with no 'foot-prints on the sands of time' to mark its course. Whatever tributary connection,

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Sea, and the East coast of Africa. He then visited Bokhára, Samarkand, Balkh, Kábul, and Delhi, where he spent eight years. Separated from an embassy to China, he reached Cambay and Calicut, crossed to the Máldives, and thence to Ceylon, Southern India, and Bengal; passed the mountains of Tibet, and embarked for Java. After visiting China, he returned by Calicut, Yemen, Baghdád, and Damascus, to Cairo. Again he set out to perform the Hajj, and, returning to Tangiers, visited Spain, re-crossed to Morocco, and penetrated through the desert into the Soudan, whence he finally returned to Fez

"*Mohammed Ebn Batuta* auctor nobis videtur fide omnino dignus; multa eorum quae notavit, mirifice congruunt cum iis quae viatores recentiores consignaverunt; quae non ipse spectavit, ea tanquam ab alios sibi relata refert."—Kosegarten, *De M. Ebn Batuta*, p. 8, Jena, 1818.

* Gray, translating "*Voyages d'Ibn Batoutah*" par Def. et Sang., pp. 130-2.

† SALÁH-UD-DÍN may have succeeded Sultan "Dâoud" [DÁU'D] whose great-granddaughter was one of Ibn Batúta's wives whilst at Málé. Sultan DÁU'D was himself the grandson of Sultan "Ahmed Chenourâzah" [AHMAD SHANU'RÁZAH], the first royal convert on the Islands to Islám. (*Voyages d'Ibn Batoutah*, p. 154.) The genealogical succession would then be as follows:—

1. S. AHMAD SHANU'RÁZAH
2. S. .....
3. S. DÁU'D
4. S. SALÁH-UD-DI'N
5. S. JALÁL-UD-DI'N

6. S. SHAHÁB-UD-DI'N | 7. Sa. KHADI'JAH | *Maryam* | *Fátimah*

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if any, may have existed with Cananore for some portion of this period, there would seem to be nothing at present to support the assertion of Barros,* that the Islands were involved in the vassalage to China, under which Ceylon was bound for 50 years between A.D. 1410 and 1460.

3.—PORTUGUESE PERIOD.

Before the arrival of the Portuguese the fusion on the Máldives between the natives and Musalmán settlers was probably complete. Muhammadanism was at any rate paramount throughout the group.

The Máldives must have been sighted by the Portuguese and fairly well known some years prior to the date of their discovery of the Islands usually accepted, viz., A.D. 1506-7.† Gaspar Correa relates how Vicent Sodré, Chief Captain of the Fleet, after the departure home of Vasco da Gama in 1502, captured four Máldive vessels *(gundras)* laden with coir, cowries, silk stuffs, and gold-woven cloths, which he sent to Cananore to be sold.‡

A.D. 1502.

A.D. 1506.

In 1506 Don Lorenzo d'Almeida was despatched by the Viceroy at Goa to the Máldives to intercept many ships from Pegu, Siam, and Bengal that used to pass through the Máldives to Mekka. The expedition consisted of two large ships, two *caravelas*, one *galé*, and a new *bargantim*, fully equipped and carrying 300 persons well armed. It left Cochin on August 1st, but, owing to treacherous currents, was carried to Ceylon.§ The Islands must, however, have been subjugated soon after, for Almeida appears to have restored the King of the Máldives in 1512-13, making him a vassal of Portugal.‖

A.D. 1512-3. Máldives tributary to Portugal.

Barbosa. (A.D. 1501-17.)

Duarte Barbosa, who sailed with Joao de Nova in 1501, and was out in the East till 1517, calls the Islands "*Palandura*."¶ Ten or twelve were then inhabited by "light-coloured Moors" *(Mouros pardos)* of small stature.** The King, a Moor, resided at "*Mahaldiu*" and paid tribute "in coir rope and other products of the country" to some Moorish merchants at Cananore, by whom he was elected or removed at pleasure, and whose vessels he was forced to load with cargoes free of expense.

Barbosa mentions the "many kinds of dried fish" *(muyta moxama)* which the Islands provide—their export trade in cowries *(buzios pequenos)* to Cambay and Bengal, and tortoise shell *(alquama)* to Guzerat—the Island manufacture of cloths, of cotton, and of silk embroidered with gold, with "very fine head handkerchiefs"—and the existence of ambergris *(ambre)* "in large pieces" of two sorts *(ponambar, minambar)*. The Islanders used no fire-arms and were timid, but very ingenious and great sorcerers *(grandes encantadores)*.

At this time Moorish vessels used to frequent the Máldives to avoid the Portuguese.

A.D. 1517.

In 1517 Don Juan de Silveira obtained permission from the Máldive King to erect a factory†† on the Islands. The King who then ruled had a rival who had a possession of some of the Islands, and also assumed the title of King. He was a wealthy Moor of Cambay, named "*Mamale*," and lived at Cananore on friendly terms with the Portuguese.* Prior to 1510 this Mamale had held nearly the whole trade between Southern

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* De Barros, *Asia, &c*, Dec. III., Tom. iii., pt. ii., ch. i., p. 3, quoted by Tennent, Ceylon, Vol. II., p. 175. (Note.)

† In 1506 by Suarez, or, according to other accounts, in the following year by Lorenzo d'Almeida.

‡ Gaspar Correa, *Lendas*, Tom. I., cap. i., p. 341. The same year the Captain and crew of a Portuguese vessel, accidentally driven to the Islands, suffered much from bad water and over-indulgent living—Tom. I., cap. iii., p. 347.

§ *Idem*, Tom. I., pp. 643-4.

‖ *Indice Chronologico das Navigaçao &c das Portuguezes (do seculo* xv.) p. 122. Lisboa, 1841.

¶ *Collecção de Noticias para a Historia e Geografia das Nações Ultramarinas*, Tom. II., p. 351-2. Lisboa, 1812.

** Barbosa (p. 351) evidently confuses the Lakkadive and Máldive groups:—"There is one Archipelago of Islands, which the Moors say are 12,000 in number ..... The first four are small and flat, called *Maldio*, and inhabited by Malabar Moors." See also Stanley's Barbosa (Hakluyt Society), p. 164. London, 1865.

†† Faria y Souss, Translated by Stevens, Vol. I., p. 219. London, 1695.

India and the Máldives in his own hands upon an exclusive contract with the reigning King to exchange at settled prices the Island products and manufactures for rice, salt, and earthenware, in which they lacked. Mamale had his own agents *(feitors)* on the Islands and at Cananore, and supplied "all the coir for the use of India." From this Moor, Afonso de Alboquerque, second Viceroy at Goa, exacted, as a condition of his retaining the monopoly of the Máldive trade (the Portuguese excepted), an annual payment of 1,000 cords of coarse coir and 1,000 of fine coir, delivered at his own charges to the Portuguese at Cananore.† To counteract the influence of Mamale, the real Máldive King also sought the alliance of the Portuguese, and undertook to render them tribute on condition that they would compel Mamale to renounce his pretensions. Under pressure from Alboquerque Mamale yielded for a time, but soon, stung by the derision of his enemies, desired to regain his rights supported by the Portuguese. This disgusted the Máldive King exceedingly.‡

Mamale.

On the information given by Alboquerque to the Court of Portugal regarding these Islands, and the advantages to be derived from them, Lopo Soares, his successor in the Government of India, received orders from home to come to terms with the real King and to form a solid establishment in his kingdom. He had been instructed to promise all that was desired, and obtained what was wished.§

During this period the Máldives must have suffered considerably from the frequent descents not only of Malabar corsairs but of Portuguese cruisers carrying on a system of virtual piracy. Thus, in 1517, Dom Fernando de Monroys and Joao Gonçalves de Castello Branco, under the authority of the Viceroy Soares, proceeded to the Máldives to intercept Jeronyms de Sousa who was "playing the pirate" among the Islands, but, ignoring their mission, commenced filibustering on their own account. The following year‖ Joao Gomes Cheiradinheiro was also despatched to the Islands to build a fort and take command. After roving among the Atols and robbing according to his fancy, he landed at "*Mafacolou*," where the King resided, and strongly fortified himself. The exactions and conduct of the Portuguese garrison became so intolerable that the Máldivians invoked the aid of one of the powerful coast rovers, a Moor of Cochin named "*Patemarcar*," who sailed with 12 *paroas* and made a sudden attack on the Portuguese encampment. The defenders (including Gomes) were killed to a man, and their vessels looted.¶

A.D. 1518.

According to Barros, Simao Sodrè was sent, a few years later, by Vasco de Gama (3rd voyage, *circa* 1524) from Cochin to the Máldives to attack the Moors, who intercepted supplies for the fleet, chiefly coir rope.**

A.D. 1524-5.

In 1525 Mamale, "the most honoured Moor in India"—"a titular King of the Máldives"—was chased by Vicent Sodrè with four vessels, captured, and put to death.††

Notices occur in the Portuguese historians of the continuance of this period of *quasi* legalised piratical expeditions proceeding to the Islands almost yearly;‡‡ and it is probable that the Portuguese retained their hold on them, unopposed by the Máldivians at least, until the middle of the 16th century, exacting, directly or indirectly, an annual tribute.

A.D 1526-8.

* Lafitau, *Histoire de Découvertes et Conquestes des Portugais dans le Nouveau-Monde*, Vol. I., p. 552. Paris, 1733.

† Gaspar Correa, *Lendas*, Tom. II., p. 129.

‡ Lafitau, *Découvertes et Conquestes des Portugais*, Vol. I., p. 552.

§ *Idem*, Vol. I., p. 522.

‖ Correa, *Lendas*, Tom. II., p. 508.

¶ *Idem*, p. 568; Faria y Souza, Translated by Stephens, Vol. I., pp. 225, 229.

** Stanley's *Three Voyages of Vasco da Gama* (Hakluyt Society), p. 404. In 1777 the "Nine-Degrees Channel" between the Lakkadives and Minakal was still known as "the channel of Mamala" *(canal de Mamale)*. See Stavorinus' *Voyages to the East Indies*, Vol. III., p. 280. (Wilcocke's Translation, London, 1798.)

†† Lafitau, *Découvertes et Conquestes des Portugais*, Vol. II., p. 54.

‡‡ *E. g.*, George Cabral (Correa, Tom. III., p. 79) and Martin Alphonso Insarte (Stephen's *Faria y Sousa*, Vol. I., p. 299) in 1526; Simao de Mello (Correa, Tom. III., p. 228) in 1528.

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A.D. 1540-5.

On occasions they did not hesitate to assert their authority. In 1540 a Moor lord was seized, put in chains, and full penalty exacted for the murder at the Máldives of some Portuguese;* and five years later the offer of the title and privileges of 'Lord of the Máldives' was made to "*Pocoralle*," brother of Mamale, on certain conditions.†

Sultan Hasan. A.D. 1552.

Pyrard (pp. 169-174), on hearsay, carries back the history of the Islands some 50 years prior to his captivity. The King then ruling at the Máldives, named HASAN,‡ who was of pure and ancient race, finding his authority qualified by the influence of a near relative called 'ALÍ,‡ a rival to the throne—or as Laval rather thinks, "inspired of Heaven"—voluntarily abdicated, and crossing over secretly to Cochin with his wife and some of his suite embraced Christianity under the name of *Dom Manuel* after the reigning King of Portugal.§

Sultan 'Alí.

His rival was at once elected King by the Máldivians.

The ex-King, however, sent to demand his accustomed tribute, and to counsel his late subjects to become Christians. But they rejected alike his claims and his advice, replying that they "would die sooner than change their religion." Dom Manuel then sought and obtained the support of the Portuguese at Goa to enforce his asserted rights.

The first expedition of the Portuguese to the Islands was disastrous, resulting in the loss of a *galere*, three other vessels, and many lives; but the following year they returned with a larger force and better pilots, defeated the Máldivians, and put to death their brave King, who "preferred to fall fighting than basely fly."‖ Málé was occupied and fortified, while other Islands also felt the invader's sword.

Ultimately all the assembled chiefs were informed that the Portuguese had no wish to coerce them into a change of religion or ought else, but insisted on the payment of the ex-King's dues. A Máldive agent¶ with limited authority, appointed by the Portuguese, was to be stationed at Málé, and the trade of the Islands conducted exclusively with that nation.

A.D. 1563 *circa*.

For 10 years this Portuguese yoke was quietly borne. But meanwhile two brothers, MUHAMMAD BODU TAKURU** and HASAN KILÉGE,** though each but the humble *Katibu* of his own island, unable to brook the sway of 'the infidels,' had retired to the distant Huvadú (Suvádiva) Atol. Gradually strengthening themselves in their fortress of Gaṇ,†† they at length virtually held the Portuguese at Málé in a state of siege, and harassed them incessantly. This continued for eight years, when, with the aid of four pirate vessels from the coast ("*Corsaires Malabares*"), the brothers made a well-timed attack on Málé, carrying the fort by a night escalade and killing 300 of its defenders. This successful *coup* they crowned by the immediate rout of their quondam allies, and the recovery of their share of the booty.

Sultans Muhammad and Hasan.

The brothers then established themselves conjointly as "absolute Kings," marrying, respectively, the wife and daughter of the Sultan executed by the Portuguese—a politic step which tended to avert the animosity of nobles of higher birth.

A.D. 1566 *circa*.

Three years were spent by the Portuguese in repeated efforts to retrieve their fortune, but every expedition was repulsed.

* Correa, *Lendas*, Tom. IV., cap. xii, p. 152. † *Idem*, Tom. IV., cap. xii.

‡ Pyrard.—"*Assan*," "*Haly*." § The exact date was A.D. 1552. See Note (3).

‖ 'Fleeing in battle before the face of an infidel' is classed among the 17 *Kabíra*, or "great" sins.—Hughes' "Notes on Muhammadism," p. 140, London, 1877.

"Who falls in battle 'gainst a Giaour
Is worthiest an immortal bower."

Paradise is guaranteed as the reward of those who fall fighting against 'idolaters' (*Kurán*, Sura, xlvii, 4-7).—Stobbart, "Islám." p. 155.

¶ The first "agent" was grandfather of the Sultan's wife of Pyrard's day.

** Pyrard.—"*Mohamed Bode ta couru*," "*Assan Quilogue*." Tradition, according to Christopher, (Trans. Bombay Geog. Soc., 1836-8, p. 74) assigns the glory of the deliverance from the Portuguese thrall to a Tiladummatí chief.

†† Pyrard.—"*Gante*." See *ante* pp. 15, 18.

At length, wearied with the protracted struggle and mutually desirous of peace, a treaty was concluded, by which independence was accorded the Máldivians under certain restrictions:—viz., a fixed annual tribute, as his sole claim on the Islands, payable at Cochin to the Christian ex-King, his heirs, and successors :* the Island Ruler to have in future an inferior designation (*e. g.*, Prince, Duke),—the title of "*Qaïlaque*" [M. *Kilage-fánu*] being limited to two nobles bound to superintend the tribute payment jointly with the ex-King's own agent: and, lastly, trade to be conducted solely with the Portuguese unless by express permission.

"Notwithstanding this peace," sententiously remarks Pyrard half a century later, "the Máldivians bear the Portuguese deadly hatred."

The brothers continued to reign together for 25 years, though not without internal troubles fostered by fractious nobles of purer blood. Muhammad survived his younger brother three years, and was succeeded by his son IBRÁHÍM, the Sultan in whose reign occurred the wreck of the "Corbin."

S. Ibráhím. A.D. 1591 *circa*

"François Pyrard of Laval in Bas-Maine was one of a company of French adventurers, who, incited by the reports of great discoveries made and vast wealth gained by the mariners of other countries in the 16th century, equipped two vessels which left St. Malo in Normandy in the year 1601. Pyrard was on board the 'Corbin.' Both vessels rounded the Cape and left Madagascar in safety; but the 'Corbin,' piloted by an Englishman who had lost his bearings in the Indian Ocean, was wrecked on the Malosmadou Atoll [Máḷosmaḍulu Atol] of the Máldives on the 2nd July, 1602. The crew [about 40 in all] were taken captive, and the goods recovered from the wreck became, by the Máldive law [then in force], the property of the King.

F. Pyrard.

"The subsequent history of the captives bears a strong resemblance to that of Knox's crew in Ceylon.†" So long as the Frenchmen were thought to have money they were compelled to buy provisions at so high a rate as to reduce them at length to great extremities. The Captain, with many others, died of sickness or starvation: two parties (of twelve and four persons) escaped at different times: whilst four more of the crew were executed for an abortive attempt. Laval and his three remaining companions were then interned in separate islands, but, subsequently reunited, shared a joint deliverance after five years' captivity.

Captive at the Máldives. A.D. 1602-7.

"Pyrard, by learning the language and conducting himself discreetly, won, as Knox did, the favour of his guardians, and finally of the King; and in the same way was allowed to go from island to island for purposes of trade."† This indulgence, coupled with the reliance of foreign traders at Málé, rendered him "somewhat rich according to the notions of the country."‡

Of the social economy and customs of the Islanders, Pyrard has drawn a picture in detail exact and full—brightened throughout by touches striking and *bizarre*—which, in spite of the lapse of 2½ centuries, stands out still a fresh and faithful portrait of the Máldivians at this day. Neither in moral characteristics, nor—until very recently, and that but partially—in political administration, have they suffered change. Time has but softened down the blemishes of a petty Oriental despotism and obtrusive licentiousness into the hues of purer and more civilised *régime*.

Pyrard's narrative.

In the month of February, 1607, Málé was startled by the sudden appearance in the offing of a powerful fleet of 16 sail ("*galiotes*") manned by Mukwas ("*Moucois*")§ which had been despatched with hostile intent by the "King of Bengal."

A.D. 1607. Expedition of the "King of Bengal."

There was no thought of resistance. Every one strove to hurry off with such property as the emergency allowed and, thanks to their swift-sailing boats, most contrived to escape. The King, less fortunate, embarked at the last moment with his three wives on board his slower "*galeres*," and, the wind falling, was easily overtaken by the eight vessels the enemy detached in pursuit. The King and a few attendants were cut down, and the *galeres*, and afterwards the palace, looted.‖

* Note (3). † Gray, J. R. A. S., Vol. X., n. s., 1878, p. 174. ‡ Pyrard, p. 70.

§ Note (4). ‖ Pyrard, pp. 222-30.

THE MÁLDIVES.

HISTORICAL SKETCH.

Character of S. Ibráhím.

"His hour was come," says Pyrard (p. 226), "and he well deserved his fate for the great cruelties he had committed"—a fate which, even in death, (having fallen at the hand of Muslim foes,) denied him the honours due to a martyr (*Shahid*—Pyrard, "*Chayde*"), consigning him a lowly grave in a distant isle (*Gurádú*) with the meanest of his subjects instead of a stately burial in his self-built mausoleum at Málé.* Sensual, heartless, and unscrupulous to a degree, he yet possessed some redeeming qualities which command respect. Industrious and passionately fond of art in every branch, he encouraged, both by personal example and Court favour, the development of artistic taste in his kingdom. A disposition naturally ready, combined with keen sagacity, prompted him ever to grasp fresh knowledge likely to benefit his realm and people.†

After a short stay of ten days to load their vessels with the booty, including some five and twenty cannon, the fleet slowly returned to the Continent (after visiting the Northern Atols) carrying with them the four Frenchmen, as well as the step-brother and brother-in-law of the late Sultan.‡

Pyrard "underwent many further adventures and more captivity [in India], and it was not till 1611 that he once more set foot on the beloved soil of France."§

Ranna Baḍéri Tákuru. A.D. 1608 *circa*.

Of what transpired at the Máldives after his deliverance, Laval heard at Goa (p. 231) that the four chief nobles disputed the succession, each fighting 'for his own hand' (Sultan Ibráhím having left neither children nor nephews to succeed him),‖ and that after this internecine war had lasted some time, 'Alí Rájá¶ of Cananore intervened, defeated the other aspirants, and by securing the kingdom for the late chief Queen's brother, RANNA BAḌÉRI TAKURU,¶ as his Vice-Regent, re-established peace.

A.D. 1610-1710.

For another century the veil that shrouds the history of the Islands can at present be lifted only at rare intervals, disclosing glimpses so meagre as but to tantalise from their faintness.

4.—DUTCH PERIOD.

No show of force was needed on the part of the Dutch in Ceylon to secure a recognition of their inherited suzerainty over the Máldives. With a wise discretion the Máldive Sultans, for at least two and a half centuries past, have voluntarily placed themselves under the protection of the dominant European power in this Island, and courted its alliance.

A.D. 1640.

It was worthy the mercenary spirit of the Dutch, that hardly had they obtained a footing in Ceylon, than they despatched a vessel to ascertain the nature and prospects of trade at the Islands.**

A.D. 1645.

Five years later occurs perhaps the first record of the annual Embassy from the Sultans to the Governors of Ceylon, which has been continued uninterruptedly to the present day.††

Wreck of the "Persia." A.D. 1658.

The first Englishmen (with the exception of the pilot of the "Corbin") to land on the Máldives were, as far as is known, the unfortunate Captain and crew of the merchantman "Persia," which sailed from England and was wrecked on the Atols in 1658.

All hands reached the shore in their boat, but as this was too small to allow of their crossing the sea in it, a vessel was purchased from the Islanders. Captain William Vassal and twelve others put to sea in their boat, accompanied by the vessel, and steered for Ceylon. They made land at Puttalam, but were at once seized, plundered, and "carried up before" Rájá Siṇha II. at Kandy, where they shared the fate of Knox and the crew of the "Ann." Knox gives the names of all and some account of their treatment

* Pyrard, p. 230. † *Idem*, p. 159. ‡ *Idem*, 231-4.

§ Gray, J. R. A. S., Vol. X., n. s., 1878, p. 175.

‖ Pyrard adds: "*Et le royaume ne tombent jamais en quemoüille, non plus qu'en France*"—a statement at least thrice refuted in the history of the Islands.

¶ Pyrard (pp. 231-2), "*Ali Rhadia*"; "*Rana Banduy Tucouron.*"

** Dutch Records (Summary of Resolutions of Council), Galle, Nov. 30th, 1640.

†† *Idem*, Galle, Dec. 21st, 1645.

and conduct. Two, Hugh Smart and Henry Man, came to a violent death.* In 1683, after 25 years' captivity, two others, Thomas Kirby and William Day, managed, with much difficulty, to reach the Dutch outpost at Sítáwaka and effect their escape,† as, four years previously, Knox and Rutland had safely traversed the forests separating Anurádhapura from Arippu on the N.W. Coast.‡ Vassal was still a prisoner at Kandy in 1696.§ The fate of the rest remains unknown.

Dutch survey of the Máldives. A.D. 1671.

Instructions were issued in 1671 by the Dutch Government in Ceylon for an accurate survey of the Lakkadive *(Baxos de Padua)* and Máldive *(Maldives)* groups, to better secure the navigation of "the Company's costly ships" to and from Persia and the Netherlands. Governor Rykloff Van Goens took advantage of the opportunity to send by the hands of the Surveyors a letter and presents to the Máldive Sultan, MUHAMMAD IBRÁHÍ'M, in courteous acknowledgment of his good treatment of some Dutch and native sailors, the crew of a Jaffna vessel wrecked in his dominions.‖

S. Muhammad Ibráhím.

A.D. 1688.

The Sultan in 1688 also bore the name MUHAMMAD IBRÁHÍ'M,—probably the same Ruler who was reigning seventeen years previously.¶

The local Dutch Records furnish a clue to the regular succession of the Sultans from 1711.

S. Muhammad 'Imád-ud-dín Muzaffar. A.D. 1711.

In that year Sultan MUHAMMAD 'IMÁD-UD-DÍ'N MUZAFFAR was on the throne, and it was marked at the Máldives by a sudden and unprovoked attack of some "enemy" (probably Malabar pirates) who withdrew unexpectedly within a month—'by the interposition of Providence,' writes the Sultan.**

S. Ibráhím Iskandar. A.D. 1721.

Muhammad 'Imád-ud-dín died in 1721, and was succeeded by his son IBRÁHÍ'M ISKANDAR,†† whose reign of 30 years is noteworthy from the close and friendly commercial connection established between himself and the Dutch. Sultan Ibráhím proved himself an enlightened, humane, and liberal ruler. He steadily encouraged intercourse with foreigners, removed obstacles to trade with his subjects, and won the confidence and regard of his powerful allies, the Dutch. English, French, and Portuguese vessels frequented Málé, whilst the Dutch sent over from Ceylon one or two vessels in several years to negotiate for cowries.‡‡

A.D. 1726 Wreck of the "Ravestein."

The survivors of the Dutch ship "Ravestein" wrecked among the Islands in May, 1726, with a valuable cargo of gold, received every attention at the hands of this Sultan, whose generous action throughout under most trying circumstances justly evoked the gratitude of the Dutch Governor at Colombo.§§

The same year a scare of impending war with Cananore was made the excuse for a small supply of cowries to the Dutch‖‖ who, alarmed at the possible cessation of this profitable source of revenue, lost no time in guaranteeing the Sultan assistance—significantly pointing out that the Cananore King in his wisdom knew better than to become the enemy of "the Company's friend."¶¶

* "An Historical Relation of the Island Ceylon in the East Indies, &c.," by Robert Knox, a captive there near Twenty years, Part IV., ch. iv., London, 1681.

† Dutch Records (Miscellaneous), Colombo.

‡ Knox, Ceylon, Part IV., ch. x., xi.

§ There is extant a letter in Portuguese from "*Gulielmo Vassall o Feitor Engles*" (Dutch translation dated March 21st, 1696) imploring the Dutch to obtain his release from captivity.

‖ Dutch Records (Resolutions of Council), Colombo, 1671.

¶ *Idem* (Miscellaneous), Colombo, 1688.

** Sultan's letter to Governor H. Becker, dated October 19th, 1711 (Dutch translation) :—"*Nu heeft God gementioneerd vyand weder van heer verdreven.*"

†† Sultan's letter to Governor T. A. Rumpf, dated October 26th, 1721.

‡‡ The Portuguese and French especially seem to have ingratiated themselves into the Sultan's favour, judging from the fact that some of the annual letters to the Dutch Governors in Ceylon are in those languages, viz.: —Portuguese, May 1st, 1723; May 9th, 1734; May 19th, 1735: French, June, 1726.

§§ Note (5).

‖‖ Sultan's letter dated October 31st, 1726.

¶¶ Reply of Governor P. Vuyst, dated January 7th, 1727.

THE MALDIVES.

HISTORICAL SKETCH.

In October, 1733, a cyclone visited the group, devastating and laying under water many islands (particularly among the Northern Atols), and causing great loss of life and property. The Sultan, with Muslim resignation, accepted the disaster as "the will of God."*

A.D. 1750.

Sultan Ibráhím died in 1749, having previously installed his brother as his successor —his own son being still a minor and ineligible.†

S. Muhammad 'Imád-ud-dín Mukkarram.

The new Sultan assumed the title MUHAMMAD 'IMÁD-UD-DI'N MUKKARRAM. He did not long enjoy his honors.

In 1753 occurred perhaps the most stirring revolution that has ever marred the peaceful history of the Máldives.‡

A.D. 1753. Revolution at Málé.

Faḍiáru Kalóge-fánu, the Prime Minister, dissatisfied with the Sultan's administration, and aided by a small faction, secretly entered into communication with 'Alí Rájá of Cananore with the avowed object of handing over the Islands to him. Armed vessels were to be sent to Málé under pretence of an Embassy, and suddenly seize the Island. The scheme succeeded fully. Three vessels with *lascarins* and munition of war were despatched from Canánore and anchored peacefully before Málé.§ The same night the gates of the Fort were treacherously thrown open by the Faḍiáru's party. Before the Sultan, hastily roused from sleep, could collect together a handful of followers and oppose the invaders, the powder magazine and warehouses had been fired, and the town was in the hands of the enemy. Ultimately yielding to the advice of the Faḍiáru (who still feigned loyalty) that resistance was useless, the Sultan, accompanied by his nephew, met the Mápiḷḷas to arrange terms of peace. Thereupon he was seized and taken on board the Cananore vessels, which sailed away at once.

Abduction of the Sultan.

His subsequent fate.

The misfortunes of the luckless Sultan did not end here. On the return of the victorious fleet to Mangalore 'Alí Rájá presented his captive, whose eyes he had cruelly put out, to Haidar 'Alí. That Prince "was so irritated at the barbarity of Ali Raja, that he instantly deprived him of the command of the fleet; which he afterwards gave to an Englishman named Stauret. Shocked at the inhumanity of Ali Raja, he entreated the King of the Maldives to forgive the outrage his Admiral had been guilty of, and after expressing how much he was afflicted at the event, and using every argument in his power to console him, he gave him one of his palaces for a retreat, with a revenue sufficient to procure all the pleasures his situation permitted him to enjoy."‖

Meanwhile, at the Máldives, the traitor Faḍiáru soon had his reward. Immediately after the abduction of the Sultan, he claimed from 'Alí Rájá the vacant throne, but the Cananore Court, considering that equal harm would be likely to accrue to their garrison by admitting or rejecting the Faḍiáru's claim, wisely avoided the dilemma by directing that he should be bound hand and foot, placed in a sack, and thrown into the sea. The order was promptly executed. The Mápiḷḷas then temporarily assumed the Government, but harassed the Máldivians to such an extent, that they shortly rose suddenly in the night and overpowered their oppressors. Houses were re-built, the Sultan's wives and suite allowed to cross the sea to him, and the Government carried on by the Ministers in his name. Warned by recent events, application was further made to the Dutch for a supply of ammunition on payment.

Mápiḷḷas ousted from Málé.

* "*Mas com tudo consolo com a vontade de Deos.*"—Sultan's letter (Portuguese) dated May 9th, 1734.

† Statement of *Ahmad Kéri* made at Galle April 11th, 1750.

‡ Letter to Dutch Governor from the Ministers of the abducted Sultan, 1753.

§ "Ali Raja having formed a fleet, at the commencement of the fair season made the conquest of the Maldive Islands, under the pretence of some injustice done to his nation..... This conquest was made in the name, and on the account of Hyder ['Ali], whose colours were borne by the fleet. Ali Raja had embarked on board a number of Sepoys, or disciplined soldiers; so that Hyder's colours had no sooner appeared at sea, but they enforced respect."—*The History of Hyder Shah, &c.*, by M. M. D. L. T., p. 97, London, 1784 (Reprint, Calcutta, 1848).

‖ *Idem*, p. 98. "The courtiers and poets of [Haidar's] court, little acquainted with Geography, having learned that their master was become King of 12,000 islands, added to his titles that of 'King of the Islands of the Sea.'"

It is curious that the same year (1753) which witnessed for the Máldivians the temporary deprivation of a Supreme Ruler, should usher in the era of their historical existence as a race. The letter from the Sultan's Ministers to the Ceylon Government, conveying details of the *bouleversement*, also intimated the extension by the Chief Government at Batavia of the privilege to fly a flag and pennons—a virtual recognition of the *quasi* independence of the Máldives.*

Dutch recognise Máldive flag. A.D. 1753.

The interregnum lasted six years, during which period the Government was administered by *Hasan Raṇṇa Baḍéri Maṇiku-fánu* on behalf of the absent Sultan, in the name—for two or three years at least—of his daughter A'MINÁ RAṆI KILAGE-FÁNU.†

Interregnum. A.D. 1753-1759. Sa. A'miná Raṇi Kilage-fánu and Hasan Raṇṇa Baḍéri Maṇiku-fánu.

The year succeeding the revolution a small detachment of French troops under a Corporal was dropped on the Máldives by the great Dupleix,‡ the opponent of Clive in the Carnatic, where hostilities were being actively carried on between the English and French.

No sooner had the French raised their flag on the Islands, than they found it necessary to send over to their Dutch allies at Colombo for supplies.§

French occupy Málé. A.D. 1754-9.

Dupleix was recalled soon after the conclusion of the Provisional Treaty of Peace in December, 1754; but the *corps-de-garde* at Málé was not relieved by M. de Lally, his successor, until 1759.‖ Some may have remained, as within two years of their arrival (1756) the interim ruler Hasan was reported to have 20 Frenchmen in his service.** The same year 'Alí Rájá of Cananore,¶ anxious to restore the blind Sultan to his subjects (presumably under pressure from Haidar 'Alí), wrote to Málé desiring that four persons should be sent over to India to act as escort.** He appears, however, never to have returned, and probably died shortly afterwards.

At any rate, in 1759 Hasan Raṇṇa Baḍéri had acquired sufficient popularity and influence to secure the Sultanship for himself. He took the name GHA'ZÍ' HASAN 'IZZ-UD-DÍ'N.††

S. Ghází Hasan 'Izz-ud-dín. A.D. 1759.

The following year the Islanders had to repel another raid of the Mápiḷḷas. The Malabar fleet, manned by 700 "*Turken*" seized the uninhabited island of Funadú, and commenced to bombard Málé. The Máldivians hastily equipping some vessels, attacked, and finally drove off the invaders, with the loss of five prisoners.‡‡

Mápiḷḷas attack Málé. A.D. 1760.

Sultan Ghází Hasan 'Izz-ud-dín died in February, 1767, during *Ramazán*, restoring the throne before his death to the former line, by appointing the son of Sultan Ibráhím his successor—his own children being minors.§§ The new Sultan, MUHAMMAD GHIYÁS-UD-DÍ'N, seems to have commenced his reign well. "He managed the affairs of the

S. Muhammad Ghiyás-ud-dín. A.D. 1767.

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* Letter from the Ministers of the abducted Sultan, 1753. The Máldive flag as displayed on modern *gundras* is the ordinary plain Muslim *red*, rarely relieved by a white crescent.

† "Dat nooyt voor deezen hunne Eylanden geeegeerd is door een vrouw als zedert de wegvoering van de voorwart gementioneerd Koning" [S. Muhammad 'Imád-ud-dín Mukkarram].—Statement of *Muhammad Kévi*, *'Alí Kévi*, and *Kásim Kévi*, made at Colombo, 18th November, 1756. *Vide ante*, pp. 24, 25, 30.

‡ "Dupleix was a vain, ambitious man, possessed of very considerable ability, and burning with desire to extend the French power in India. With all his vanity, however, he united profundity as a politician, while he was possessed of rare address in the management of Indian affairs. He saw clearly that on the one hand the existence of any other Europeans in India, and particularly of the English, would be perilous to his hopes; and on the other, that he never could succeed but through alliances with the native princes, and by simulating adhesion to the cause of some powerful chief."—Parliamentary Papers ('Nawaubs of the Carnatic') May, 1861. A remark of M. Sonnerat ("*Voyage aux Indes Orientales, &c.*," Tome II., 84, Paris, 1782) sufficiently explains Dupleix's occupation of Málé:—"Pour se soutenir dans cette riche contrée [l'Inde], il faut nécessairement un port à la côte de Malabar, d'où nos escades puissent observer en tout tems celles des ennemis: on sait que deux fois on n'a dû la perte de Pondichéry qu'à l'abandon des escadres qui quittèrent la côte de Coromandel pour revenir à l'île de France."

§ Note (6). ‖ Sonnerat, "*Voyage aux Indes Orientales, &c.*," Tome II., 97. ¶ Note (7).

** Said, however, to have been enlisted from successive private rice vessels, and certain to be dismissed should the exiled Sultan get his own again.—*Vide* † *supra*.

†† Sultan's letter dated 22nd day of *Ramazán*, A. H. 1174 (1760).

‡‡ Statement of *Tuládá Katíbu* made at Colombo, November 17th, 1761.

§§ Sultan's letters, 1767.

THE MÁLDIVES.

HISTORICAL SKETCH.

Kingdom with strict uprightness and impartiality, to the contentment and prosperity of his subjects. Moreover, he rendered assistance and support to the wife and children of the late Sultan. For all these blessings we adore the Almighty God."* However, three brothers of the Sultan did not share in the general enthusiasm, for within a few months they conspired to dethrone him. The plot coming to light, they were banished to a neighbouring island, and subsequently persisting in their treasonable designs, to a distant Atol. Here they were followed secretly by their wives and children, who contrived to carry off much State property. The rebels then altogether disappeared, though the Dutch Governor was asked to arrest and hand them over to the Sultan's Ambassador, in case they reached Ceylon.†

A.D. 1771. It would appear that in 1771 the Máldivians were again threatened with an invasion by the Mápillas—ever their inveterate foes‡—and the Dutch assented, as an exceptional indulgence, to supply the Sultan with a mortar and ammunition on payment.§

A.D. 1772. In 1772 the Sultan found it necessary to arrest eight malcontents, who, however, managed to escape from Málé in a fishing boat.‖

It is perhaps not unreasonable to hazard the conjecture that the storm of revolt, which had never ceased to lower from the day of his accession—gathering strength year by year despite all precautions—culminated (1773–4) in the overthrow and death of Sultan Ghiyás-ud-dín, the last of his line.¶

S. Ghází Muhammad M'uizz-ud-dín. A.D. 1774.

The silence preserved by the new Sultan, GHA'ZÍ MUHAMMAD M'UIZZ-UD-DÍ'N, elder son of Sultan Ghází Hasan 'Izz-ud-dín, the founder of a rival dynasty,** touching the fate of his predecessor and the circumstances attending his own assumption of the Sovereignty, viewed in connection with a tradition related by Christopher, still vaguely current, is ominous of ill. "We were told," says Christopher, "that a Sultan, who reigned about one hundred years ago, rendered himself obnoxious to the people by ridiculing their religion. He, however, undertook a voyage to the Red Sea on a pilgrimage to Mecca, and during his absence a nobleman, named Faruna Kalegefana [*Fáruná Kilagefánu*], who was a leader of the popular party, and had gained great influence, determined with others to prevent the resumption of the Sultanship by the absent prince by putting him to death, if he should return. Return he did; but before he could land the plot against his life was carried into execution. Some of the conspirators, without divulging their purpose, pushed off in a boat, under pretence of bringing the Sultan on shore. He entered their boat, and while returning they bound him hands and feet, and fastening stones to his feet, threw him overboard.

"On landing they announced the accomplishment of their purpose, and being now joined by the rest of their party, proclaimed their leader Faruna successor to the murdered prince, by the name of Sultan Mahomed Nooradeen. On his elevation he banished to Suadiva Attol the son of the man whose place he filled, but after a few months he himself was obliged to quit the station to which he had waded through crime, and to abdicate in favour of a Prince of the royal blood, in consequence of the people not wishing to have on the throne one who was not descended from the family which had so long commanded their homage and allegiance. The son of the Sultan who was murdered by drowning, and his offspring, lived nearly independent in the Southern Attols until the year 1831. Some of his decendants are still alive [1836-8], and are permitted to visit Málé."*

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* Sultan's letter, 1767. A free translation of the Arabic. † *Idem.*

‡ Sultan's letter, 1771. (Dutch translation, dated August 27th, Colombo.)

§ Reply of Governor I. W. Falck, dated December 30th, 1771 :—"Of schoon wy geen handel mogen dyven in ammunetsie van oorlog heb ik echter aan Uwer Hoogheids afgezant een mortier met de daer toe nodige bommen aengeboden; maer hy heeft zwarigheid gemackt hetzelve om den hoogen prys aen te neemen."

‖ Sultan's letter dated September 25th, 1772.

¶ Last letters of S. Ghází Muhammad Ghiyás-ud-dín, dated 4th November, 1773 (Colombo); November 20th, 1773, (Galle).

** First letter of S. Ghází Muhammad M'uizz-ud-dín, dated November 2nd, 1774 (Colombo).

†† Trans. Bombay, Geog. Soc., 1836-8 (Reprint 1844) p. 73. See Note (8).

Whether or not the unexplained disappearance from history of Sultan Ghiyás-ud-dín be connected with the tragic event above related, it seems certain that in 1774 the throne passed finally to the descendants of Hasan Ranna Badéri (Sultan Ghází Hasan 'Izz-ud-dín), with whom it has rested to this day.

A.D. 1777.

A French vessel with some ladies was cast away on the Island of Himiti in 1777, and all on board met with the kindest treatment from the Sultan.*

S. Hasan Núr-ud-dín. A.D. 1779.

Sultan Ghází Muhammad M'uizz-ud-dín reigned from 1774 till his death on October 2nd, 1779, and was succeeded by his younger brother, HASAN NU'R-UD-DI'N.†

During the reign of Sultan Núr-ud-dín another French (or English) vessel, containing specie, was wrecked among the Máldives. When the crew had got all the dollars they could from the vessel's hold, into which the rock had worked, they were provided with a passage to the Continent. One man remained, however, from choice, turned Musalmán, married at Málé, and died in 1830 or 1831‡ after 40 years' residence on the group. After the departure of the French the natives appear to have continued the search for dollars with success, for it is said that with the plunder obtained from this vessel Sultan Núr-ud-dín made the pilgrimage to Mekka, where he died.

S. Muhammad M'uín-ud-dín. A.D. 1799.

His son, MUHAMMAD M'UI'N-UD-DI'N, succeeded him in 1799.

5.—ENGLISH PERIOD.

Upon the acquisition of Ceylon by the English in 1796 the inheritance of the suzerainty over the Máldives fell to them unsought, as it had to the Dutch, by the free-will of the Sultan. In the letter of 1798 to the English Governor (Sir F. North) the Sultan, Hasan Núr-ud-dín, expresses himself as follows :—

Máldives feudatory to the English.

"I inform you that I always lived in great friendship with the former Governors, and that they have always shown me many favours. I hope that the same will take place between us."§ To which Sir F. North replied :—"[The Ambassador] will inform Your Highness how sincerely I wish to preserve the good understanding and harmony, which so happily subsists between us."‖ Thus quietly was the feudatory connection with the English established, which has remained unchanged for upwards of a century.

Wreck of the "Tranquebar." A.D. 1797.

It is unfortunate for the character of Sultan Núr-ud-dín that another case of alleged improper treatment of a wreck occurred during his reign. In January, 1797, the "Tranquebar" (Messrs. Fisher and Overend), laden with cloth to the value of 12,898 star pagodas, was wrecked on the Máldives under circumstances, *primâ facie*, little to the credit of the natives. At the request of the Madras Government, Sir F. North called upon the reigning Sultan (Muhammad M'uín-ud-dín) in 1800 for an explanation. The Sultan's "friendly explanation of the case," however, "perfectly satisfied" the Governments of Fort St. George and Ceylon.¶

Wreck of the "Europa." A.D. 1812.

The conduct of the Máldivians in the case of the "Europa,"†† which occurred a few years subsequently, stands out in a far different light. This vessel foundered among the Atols in 1812, and the account of the outrageous proceedings of the Captain and crew, —particularly during their stay at Málé,—are a disgrace to the English name. It is impossible not to be struck by the forbearance exercised by the Sultan and his people under great provocation. Nothing but absolute necessity for the preservation of order in the capital, would have led to the incarceration of an Englishman, one of their powerful and respected

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* Malte Brun's Geography, Vol. III., p. 262. Perhaps identical with the "Duras" of which Sonnerat (Vol. II., p. 98) says : "Des débris du vaisseau le *Duras*, qui se perdit, sur une de ces îles en 1776, le Roi de l'Archipel vient d'en faire contruire un de deux cents tonneaux, qu'il expédie toutes les années pour les côtes de Coromandel et d'Orixa."

† Sultan's letter dated November 10th, 1779.

‡ Leaving an only daughter who was married in 1835. Trans. Bombay Geog. Soc. 1836-8 (Reprint, 1844) p. 65. Asiatic Journal, Vol. xix. n. s. (1836) p. 190.

§ Sultan's letter dated October 21st, 1798 (English translation)

‖ Governor Sir F. North's reply, dated December 26, 1798.

¶ Appendix B. †† Note (9).

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allies. Governor Sir R. Brownrigg considered it necessary to bring the matter to the notice of the Governor-General of India, Lord Minto, and the Sultan received cordial letters of acknowledgment from both Governments.

Threatened rupture with the Lakkadivians. A.D. 1828.

In 1828 the Máldivians "seemed likely to be involved in distress in consequence of the hostile disposition of their Northern neighbours, the Lakkadivians," and appealed to the Ceylon Government for aid. Sir R. Brownrigg undertook to refer the matter to the Madras Government, as the Bíbí of Cananore (under whose rule the Lakkadives* had been for centuries) was subject to the English at Fort St. George.† The matter must have quietly dropped, as there is no record of further steps.

English survey of the Máldives. A.D. 1834-6.

A survey of the Máldive Archipelago, lying in the direct track of our trade to India, had been for many years considered of the greatest importance to navigation in these seas. "Mr. Horsburgh, in particular, exerted himself to obtain this object for the interests of Geography; and through his instrumentality chiefly a survey was directed.

"Accordingly, the survey of the Red Sea having been completed in April, 1834, Captain Moresby was ordered to proceed in the H. C. Surveying Ship 'Benares,' having under him as tenders the 'Royal Tiger' schooner, in charge of Lieutenant F. T. Powell, Assistant Surveyor, and the 'Maldiva,' a large decked boat." Captain Moresby, at the request of the Bombay Government, received a special letter of introduction to the Sultan from the Government of Ceylon, clearly setting forth the object of his mission.‡

"The 'Benares' arrived at Malé on the 15th November, 1834, but her appearance excited among the natives such apprehensions as augured ill for any friendly intercourse."

Natural timidity of character and recent political circumstances combined to induce this feeling.

Ahmad Dídí.

"The tyrannies of the reigning Sultan and the misconduct of his Ministers had, two years previously, provoked a rebellion, headed by his younger brother, Hamed Didee [*Ahmad Dídí.*]" Ah appeal was made by the Sultan for aid against his revolted subjects, but the Ceylon Government, strictly adhering to the law of nations as regards non-intervention in the internal affairs of foreign states, simply regretted the occurrence, and trusted that the rebels would return to their allegiance.‡

"The insurgents were successful; secured the person and threatened the life of their Sovereign, who procured his safety and release by promising to satisfy their demands. Hamed, nevertheless, dared not trust himself to the royal word, but embarked by night on board a large boat, and steered for the coast of Arabia; but in the Gulf of Aden his provisions had failed, his boat was leaky and so damaged, that there was little probability of escaping death either from famine or in the sea. In this distress the H. C. Surveying Brig 'Palinurus,' Commander Haines, came in sight, and supplied them with provisions as well as repaired their damages. Hamed was now enabled to reach Mocha and eventually Cochin, where he continued watching the course of events at home, and where he was supposed to be meditating the execution of a threat he had made before leaving his country, that he would revenge himself by a Malabar invasion, the horrors of which had been felt in former days by the Maldivians. Captain Moresby was naturally supposed to be the minister of Hamed's vengeance; and as soon as the 'Benares' anchored, a boat was sent off to demand the cause of coming. Their uneasiness was not removed by a request to survey.

"The suspicious nature of Captain Moresby's avowed object now co-operated with political circumstances upon minds whose characteristic trait is fearfulness.

"An interview with the Sultan being proposed, his Ministers came on board with unusual state, and apologised for delay, on account of their master's ill-health; but were very careful not to commit themselves by answering the questions put to them. Nothing could be obtained from them for many days. At length, the Sultan's health being improved, an interview was settled, but the appointed day being arrived, the Sultan had a

* Note (10).

† Reply of Governor Sir E. Barnes (dated December 8th, 1828) to Sultan's letter of A. H. 1244.

‡ Governor Sir R. W. Horton's letters, dated October 31st, 1834.

relapse. Captain Moresby was compelled, ultimately, to inform them that he should commence the survey on a certain day with, or without, their consent; and operations commenced on that day without permission. The 'Benares' having quitted the Islands for the Coast, the Maldivians were again alarmed by a letter from the Bengal Government regarding the establishment of a coal depôt." The Sultan excused himself from acceding to the proposal on the grounds of indifferent anchorage and the bad disposition of his subjects.* "After the return of the 'Benares' the natives appeared more easy, although by no means free from apprehensions; for they objected to the surveying flags, and were not satisfied until they were permitted to set up their own also.

S. Muhammad 'Imád-ud-dín. A.D. 1835.

"The obstacles in the way of friendly intercourse were eventually removed by events consequent on the death of the Sultan [Muhammad M'uín-ud-dín] in January, 1835, and the accession of his second son [at the age of 17, under the title of MUHAMMAD 'IMÁD-UD-DÍ'N]. The distresses of the people were increasing, and the public voice demanded the recall of Hamed Didee. The young King accordingly invited his uncle to his Councils, and he became the most influential adviser, although he declined any official situation. He took advantage of his position to pay a debt of gratitude by supporting the wishes of the Company in effecting the survey. He represented to his countrymen the folly of opposing a Government which was so powerful, and from whose dominions they derived their staple food.: on the other hand, he endeavoured to remove any bad impressions which the conduct of his countrymen might have given: and, lastly, he obtained permission for Lieutenant Young and Mr. Christopher to remain at Male after the departure of the 'Benares.'

Ahmad Dídí's influence.

"The importance of these services may be appreciated by considering the character of [the natives], and the popular belief in future events, whose close approach is indicated to them by circumstances which they observe. They have a tradition that they shall one day be subjugated to Europeans, the population shall diminish, and their Islands shall gradually sink down into the deep."†

Ahmad Dídí, endowed with larger and more enlightened views than his countrymen generally, remained steadfast in his predilection for the English, and continued to exercise at Málé a beneficial control in political affairs for several years, as adviser to his nephew the Sultan: His position, and the friendly services he had rendered, enabled him to correspond directly with the Ceylon Government, from whom he solicited and obtained personal indulgences which would hardly be extended now-a-days.‡

'Alí Dídí.

Much of his ability was inherited by his son 'Alí Dídí (recommended by the Sultan in 1850 to the notice of Lord Torrington),§ who became a domiciled Ceylon subject, and resided at Galle until his death, a few years ago.‖ Through keeping up his commercial intercourse with the Islands, he acquired considerable wealth. It is said, however, that some private misunderstanding with the Sultan had estranged the cousins for some years.

Wreck of the "Prazere Alegria." A.D. 1844.

In March, 1844, the Portuguese Merchantman "Prazer e Alegria," bound from Lisbon to Goa with a large body of convicts, was totally wrecked on the Máldives. The tax on the resources of his little Island, caused by the sudden influx of 104 Europeans, must have been great, but the strangers were "kindly received" by the Sultan "and provided with houses and such food as could be had in the country."¶ Ultimately, 93 sailed for Goa in two hired vessels, whilst the rest (including Manoel G. Quinhones, Major and Governor of Bahia de Lorenso Marques) were conveyed in a native brig to Galle, and after a short stay in Colombo supplied with funds to reach Goa.

Wreck of the "St. Clare." A.D. 1851.

The Bombay Government, in 1851, forwarded to Sir Charles MacCarthy a complaint made by the Captain of the "St. Clare," wrecked on the Islands, regarding the alleged

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* Asiatic Journal, Vol. VI. n. s. (1835) p. 22.

† Trans. Bombay Geo. Soc., 1836-8 (Reprint 1844) pp. 103-5.

‡ *Vide* Ahmad Dídí's letters of A. H. 1256-7, and replies of Governor Sir J. A. Stewart Mackenzie, dated December 16th, 1840, and December 1st, 1841.

§ Sultan's letter of August, 1850; Lord Torrington's reply dated October 4th, 1850.

‖ His son Háji Ibráhím Dídí, now Turkish Consul, has just been honoured by a commission as Justice of the Peace. (*Ceylon Government Gazette*, April 21st, 1882.)

¶ Statement of Major Manoel G. Quinhones made at Galle, April 16th, 1844.

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want of hospitality shown by the Sultan towards himself and the crew during their stay at Málé. The Sultan received a strong letter of remonstrance from Ceylon, but in his reply completely vindicated himself from the charges laid against him.*

Among recent wrecks on the Máldives, the most disastrous have been the S. S. "Aracan" in 1873, the S.S. "Sea Gull" in 1879, and the S.S. "Consett" the following year.

Sultan 'Imád-ud-dín, whose reign has lasted 46 years, is said to be in feeble health, and rarely, if ever, appears in public. For the last ten or twelve years the Government has been administered by his second son *Tuttu Manipul* or *Góma*, the Prince Regent, who is in all respects, except in title, *de facto* Sultan of the Islands. Frank and open in look and manner, he has acquired much popularity, and, as far as can be judged from outward appearances, is not averse to foreign improvements and the gradual introduction of European civilization.†

Annual Embassy.

The *Annual Embassy* from the Sultan of the Máldives to the Governor of Ceylon arrives at Colombo generally in the course of the last three months of the year.

During the Dutch occupation—and even as recently as 1844—a complimentary letter was sent annually to the Commandant at Galle, as well as to the Governor at Colombo—a striking instance of the conservatism and ignorance of events outside "their own little world" displayed by these Islanders, loath to break through a custom initiated at least as early as the Embassy in 1645 to Galle, then the chief seat of the Dutch Power in Ceylon.

There is rarely anything, save his superior rank, to distinguish the Ambassador from the ordinary Captains of the Máldive fleet.

Ceremonies at landing and reception.

The proceedings connected with the reception still retain much of the formality observed under the Dutch. On landing, the Ambassador is indulged with a non-commissioned officer's guard (furnished by the Police), and met at the jetty by a few specially deputed native headmen, under whose escort, preceded by the Mahá Mudaliyár's *lascarín* guard and native music, he makes his way slowly on foot to the audience with the Governor. Máldivian etiquette requires the Ambassador to bear with both hands on his head the silver salver containing his Sovereign's letter (in a double envelope of coloured silk and spangled muslin) and two tiny silk bags of ambergris and sea-cocoanut. The conference, conducted standing and through the medium of the Tamil and Moor Interpreters, is made as brief as possible.‡ Meanwhile "the Royal presents" are carried to Government House by Máldivian sailors.§

Purport of Sultan's annual letter.

The Sultan's annual missive (now written in Arabic) contains ordinarily a request for the continuance of friendship and favour of the English, for protection against all enemies, and for aid towards Máldive subjects who may be wrecked on Ceylon shores, and concludes with an apology for his Ambassador, and the tender of presents.‖ These letters cling so closely to a stereotyped form, as hardly to differ during the course of nearly two centuries.

Governor's reply.

The same may be said of the replies, at least during the present century. The Governor promises to do everything in his power to promote the good understanding which subsists with the Sultan: undertakes to succour shipwrecked Máldivians, whilst stipulating for the same friendly office on the part of the Sultan towards British subjects wrecked on the Atols:* expresses his approbation of the conduct of the Ambassador: and offers return presents.

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* Appendix B.

† As these pages are passing through the press news has reached Ceylon of the death of the aged Sultan on Tuesday, January 10th, 1882 (20th *Safar*, A. H. 1299). The ceremonies attendant on the installation of his younger son as Sultan, are deferred some months, according to custom. The elder son, *Dorhi Manipul*, is said to be a confirmed invalid.

‡ The Dutch Governors and Galle Commandants permitted the Ambassador to sit throughout the interview, and at its conclusion he was sprinkled with rose water, and offered betel—a delicate attention seemingly paid to all Ambassadors (*e. g.*, the Kandyan Embassy of August 3rd, 1705).

§ As illustrating the spread of Western conventionalism even to the Máldives, it is worthy of note that the last Ambassador, Ismá'íl Dídí—for many years a resident with his late uncle 'Alí Dídí at Galle, where he acquired a knowledge of Sinhalese, Tamil, and some English—discarded at the audience (March 9th, 1882) the turban, loose robe, and sandals of his country, for a fez, closely-fitting frogged uniform of grey tweed, and patent-leather shoes.

‖ Note (15).

TABLE

OF THE

DUTCH AND ENGLISH GOVERNORS OF CEYLON, AND THE CONTEMPORARY RA'JA'S OF KANDY AND SULTANS OF THE MA'LDIVES, FROM THE 17TH CENTURY.

A.D.	DUTCH GOVERNORS AT COLOMBO.	RÁJÁS OF KANDY.	SULTANS OF THE MÁLDIVE ISLANDS.
1604	- - - - - - - - - - -	Senerat - - - - - - -	Ibráhím.
1632	- - - - - - - - - - -	Śrí Rája Siṇha II.	
1656	A. Van der Meyden.		
1663	Ryckloff Van Goens.		
„	J. Hustar.		
1664	R. Van Goens.		
1671	- - - - - - - - - - -	- - - - - - - - - - -	Muhammad Ibráhím.
1680	Laurens Van Pyl.		
1687	- - - - - - - - - - -	Vimala Dharma Súriya II.	
1688	- - - - - - - - - - -	- - - - - - - - - - -	Muhammad Ibráhím.
1693	T. Van Rhee.		
1695	Paulus De Roo.		
1697	Gerrit De Heere.		
1702	N. Van Heuvel and Members of Council.		
1703	C. J. Simons.		
1707	H. Becker. - - - - - -	Śrí Víra Parákrama Naréndra Siṇha.	
1711	- - - - - - - - - - -	- - - - - - - - - - -	Muhammad 'Imád-ud-dín Muzaffar.
1716	I. A. Rumpf.		
1721	- - - - - - - - - - -	- - - - - - - - - - -	Ibráhím Iskandar.
1723	A. Moll & Members of Council		
1724	J. Hertenberg.		
1725	J. P. Schaghen and Members of Council.		
1726	P. Vuyst.		
1729	S. Versluys.		
1732	G. Woutersz and Members of Council.		
„	J. C. Pielat.		
1734	D. Van Domburgh.		
1736	J. Macare and Members of Council.		
„	G. W. Van Imhoff.		
1739	- - - - - - - - - - -	Śrí Vijaya Rája Siṇha.	
1740	W. M. Bruynink.		
1742	D. Overbeck.		
1743	J. V. S. Van Gollenesse.		
1747	- - - - - - - - - - -	Kírti Śrí Rája Siṇha.	
1749	- - - - - - - - - - -	- - - - - - - - - - -	Muhammad 'Imád-ud-dín Mukkarram.
1751	G. J. Vreelandt.		
1752	J. De Jong and Members of Council.		
„	J. G. Loten.		
1753	- - - - - - - - - - -	- - - - - - - - - - -	Ministers of Sultan.
1754	- - - - - - - - - - -	- - - - - - - - - - -	A'miná Raṇi Kilage-fánu. Hasan Raṇṇa Baḍéri Maniku-fánu.
1757	J. Schreuder.		
1759	- - - - - - - - - - -	- - - - - - - - - - -	Ghází-Hasan 'Izz-ud-dín.
1762	L. J. Van Eck.		
1765	A. Mooyaart and Members of Council.		
„	I. W. Falck.		
1767	- - - - - - - - - - -	- - - - - - - - - - -	Muhammad Ghiyás-ud-dín
1774	- - - - - - - - - - -	- - - - - - - - - - -	Ghází Muhammad M'uizz-ud-dín.
1779	- - - - - - - - - - -	- - - - - - - - - - -	Hasan Núr-ud-dín.
1781	- - - - - - - - - - -	Rájádhi Rája Siṇha.	
1785	W. J. Van de Graaf.		
1794	J. G. Van Angelbeck.		

(continued over)

THE MÁLDIVES.

HISTORICAL SKETCH.

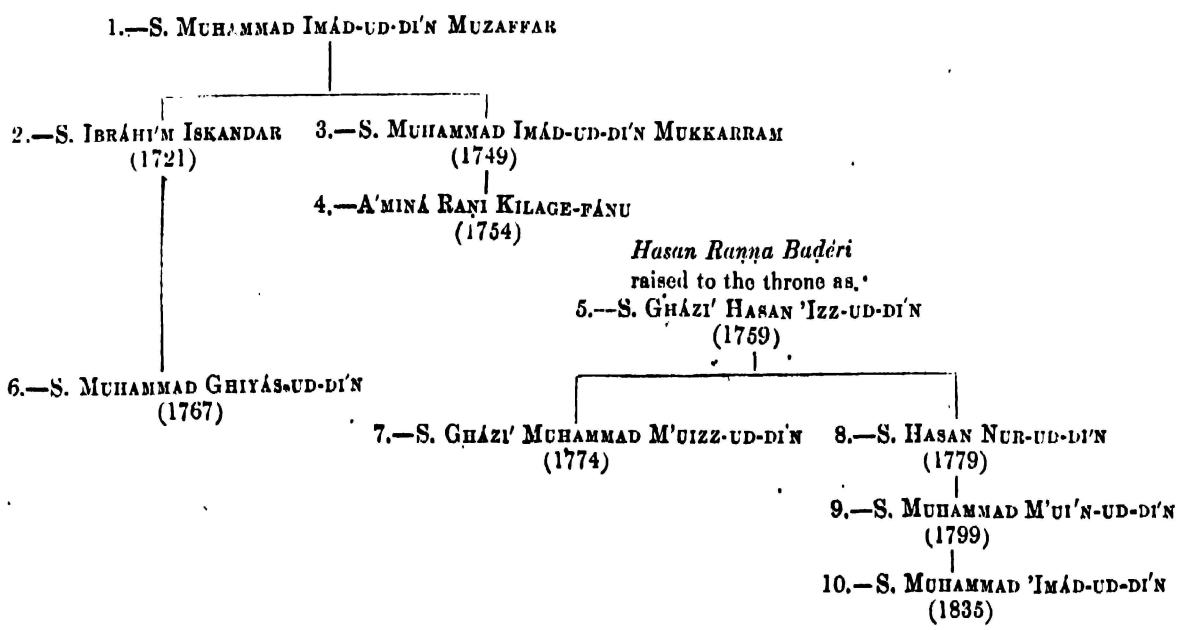
A.D.	English Governors.	Rájás of Kandy.	Sultans of the Máldive Islands.
1796	Governor of Madras in Council		
1798	Sir F. North- - - - - -	Śrí Vikrama Rája Siṇha.*	
1799	- - - - - - - - - - -	- - - - - - - - - - -	Muhammad M'uín-ud-dín.
1805	Sir T. Maitland.		
1811	Maj.-Genl. J. Wilson, *lt.-gov.*		
1812	Sir R. Brownrigg.		
1820	Sir E. Barnes.	—	
1822	Sir E. Paget.	—	
„	Sir J. Campbell, *lt.-gov.*	—	
1824	Sir E. Barnes.	—	
1831	Sir J. Wilson, *lt.-gov.*		
„	Sir R. W. Horton.	—	
1835	- - - - - - - - - - -	- - - - - - - - - - -	Muhammad 'Imád-ud-dín.
1837	Rt. Hon. J. A. S. Mackenzie.	—	
1841	Sir C. Campbell.	—	
1847	Sir J. E. Tennent, *lt.-gov.*	—	
„	Rt. Hon. Visc. Torrington.	—	
1850	Hon. C. J. MacCarthy, *lt.-gov.*	—	
„	Sir G. W. Anderson.	—	
1855	Hon. C. J. MacCarthy, *lt.-gov.*	—	
„	Sir H. G. Ward.	—	
1860	Maj.-Gen. H. F. Lockyer, *lt.-gov.*	—	
„	Col. C. E. Wilkinson, *lt.-gov.*	—	
„	Sir C. J. MacCarthy.	—	
1863	Maj.-Gen. T. O'Brien, *adm.*	—	
1865	Sir H. G. R. Robinson.	—	
1868	Lieut.-Gen. Hodgson, *adm.*	—	
1869	Sir H. G. R. Robinson.	—	
1872	Hon. H. T. Irving, *adm.*	—	
„	Rt. Hon. W. H. Gregory.	—	
1874	Hon. A. N. Birch, *adm.*	—	
„	Rt. Hon. W. H. Gregory.	—	
1875	Hon. A. N. Birch, *adm.*	—	
1876	Rt. Hon. Sir W. H. Gregory.	—	
1877	Hon. A. N. Birch, *lt-gov.*	—	
„	Rt. Hon. Sir W. H. Gregory.	—	
„	Hon. A. N. Birch, *lt-gov.*	—	
„	Sir J. R. Longden.	—	
1881	Hon. J. Douglas, *lt.-gov.*	—	
1882	Sir J. R. Longden - - - -	- - - - - - - - - - -	Tuttu Manipul (*Sultan elect*).

* The last Rájá of Kandy, deposed in 1815.

TABLE OF DESCENT

OF

THE SULTANS OF THE MA'LDIVE ISLANDS FROM THE 18TH CENTURY.



NOTES.

(1)

HISTORICAL RECORDS.—In the Sultan's palace at Málé is said to be preserved a National Record styled *Tárikho* (Arabic, *Tárikh*, 'history') or *Muskuli foi*, in which all important events and matters of State have been faithfully noted for centuries in the old Máldive character *(Dives akuru)*, in Arabic, and in the modern native character *(gabali tána)*. Tárikho.

(2)

MINAKAÏ—called MALIKU by the natives—lying between lat. 8° 14′ and 8° 19′ N., long. 72° 59′ and 73° 5′ E., is separated from the head of the Máldives by the Eight-Degree Channel, which is perfectly safe and adopted by vessels bound to the Malabar Coast or Ceylon during the S.W. monsoon. Minakaï.

The Island is a narrow strip of low land, seven miles long, in direction N.E. and S.W. From its N.W. face an irregular coral reef projects: on the S.E. side there is no reef. Within 100 yards of the reef no bottom is found. The land is less than a mile wide, the rest being a reef encircling a large lagoon, which has three entrances from the sea, one with a depth of two fathoms. It abounds in turtle and fish. The soil of the Island is coarse powdered coral with a little vegetable matter. It is quite flat, and no part is destitute of vegetation; the South side is thickly covered with tall cocoanut trees (visible from a vessel 10 or 12 miles) and underwood, the North more sparingly. Rats abound; there are some cats, a few cows and goats, large grey cranes, ducks occasionally, and swarms of mosquitos.

Though generally spoken of as one of the Lakkadive group, and, with the other "Cananore Islands, forming part of the Administrative District of Malabar," Minikaï on every ground properly belongs to the Máldives, distant only 68 miles South. Inhabited by a people of Máldive race and language,* it was formerly under the Máldive Sultans; but since the 17th century has been subject to the Rájás of Cananore, and is at present "the personal property *(jenmum)* of 'Alí Rájá." [For Administration, &c., *Vide* Note (10) "Lakkadive Islands."]

The population is about 3,000. The Islanders possess six large vessels fit for the Bengal trade *(bodu odi)*, four for coasting *(bandar odi)*, and eight fishing boats *(mas odi)*. They export fish, coir, and cocoanuts to Goa, the Malabar ports, Ceylon, and Bengal, bringing home chiefly rice, salt, spices, and cotton cloth. The erection of a lighthouse on this Island is in contemplation by the Admiralty. The P. and O. Steamer "Colombo" was stranded there during a fog in November, 1862.†

(3)

CHRISTIAN EX-KING OF THE MÁLDIVES.—Pyrard and his Portuguese editor (G. H. da Cunha Rivara) supply a few particulars touching the expatriated Christian Sultan, *Dom Manoel*, and his immediate descendants. Christian ex-King of the Máldives.

On the authority of Padre Lucena's 'Life of Francisco Xavier' (Lib. 9., ch. XV), Rivara‡ notes that in A.D. 1552 the King of the Máldives, a young man of 20, who had fled to Cochin and appealed to Garcia de Sá for help against his rebellious subjects, was baptised a Christian. "His conversion filled with joy the whole of India, exciting hopes that after the head all the members would be converted." He married a Portuguese girl of many virtues and noble blood, but died at Cochin, old, poor, and still an exile.

From contemporary correspondence between the Court of Portugal and the Viceroys of India,‖ it would appear that the Christianised Máldive Princes at Cochin were for years a constant source of trouble to the Portuguese authorities, owing to their restlessness and "follies of youth" *(mocidades)*.

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* "La peche y est tres-bonne, l'air y est fort sain et plus temperé qu' aux Maldiues, *et le peuple y a les mesmes coustumes, les mesmes moeurs et langages que ceux des Maldiues.*"—Pyrard, p. 232.

† Partially abridged from "Report during Fasli, 1268, on the Five Laccadive Islands" by E. G. Thomas (Madras Jour. of Literature and Science), and Article "Laccadive Islands" (W. W. Hunter's Imperial Gazetteer of India).

‡ *Viagem de F. Pyrard*, Goa, 1858.

§ Letter from the King of Portugal to the Viceroy Dom Duarte, dated Lisbon, January 10th, 1557.

‖ Chiefly in the *Livros das Monoes*, which may be said to commence in A.D. 1584.

THE MÁLDIVES.

HISTORICAL SKETCH.

Notes.

Dom Francisco, the eldest son of *Dom Manoel*, whilst still young contracted, against advice, a marriage with the sister of Antonio Teixera de Maçado (*circa* A.D. 1587),* and ended his days under an assassin's knife at Lisbon, whither he had betaken himself to air his grievances in person before Dom Philippe the Second.†

Another Prince, *Don Joao*, "King of the Máldive Islands" (*Rey das Ilhas de Maldiva*), also married a Portuguese wife, Dona Francisca de Vasconsellos, and obtained a reduction on his tribute to the Portuguese of 500 *pardaos* as her dowry.‡

It was probably this "Máldive King" who suffered imprisonment (*circa* A.D. 1591) for having scandalised India by putting away his wife and other misdemeanours,§ and who, with his brother *Dom Pedro*, was subsequently removed to Goa (A.D. 1597) but freely treated.‖

Ten years later, according to Pyrard (p. 210; Pt. ii., pp. 80-1), the rightful heir to the original Christian ex-king's dues was *Dom Philippe*, who resided at Goa with his Portuguese mother, and was in suit against his uncle, *Dom Paulo*, for forcible appropriation at Cochin of the tribute paid there annually by the Islanders, in terms of the old treaty of peace with the Portuguese.

This tribute consisted of cowries (Pyrard, p. 172, "*bollis*;" M. *boli*), and coir ("*cairo*, M. *rhónu*). The Máldivians every year despatched four vessels of 150 tons burden thus laden to Cochin, being liable to meet all charges and perils of the seas until the head of the Islands was cleared, after which the risk rested with the Christian king. From this tribute *Dom Manoel* and his son *Dom Francisco* delivered annually 500 *bares* of coir (*cairo*) to the Portuguese, and Pyrard says the payment in his day amounted to one-third.

(4)

Mukwas.

MUKWAS.—"The third class of inhabitants of Calicut and Malabar are the common people, who in every district are much despised, degraded, and contemptible, as slaves—the *Moucois* or *Poulia*. Their quarter is distinct, outside the towns, near the sea, and in other places at a greater distance. They differ in condition. Some dwell on the sea-board and are not permitted to live further (inland). These are properly named *Moucois*. They are all fishermen and salt workers, and throughout all the coast of Malabar no other people are employed as rowers or sailors, and they are hired for this purpose..... [In Malabar] the labourers (*Coulombin*) are the most honourable [class], the mechanics next, then the *Tiua*, and last—the meanest and most contemptible—the *Moucois*, who are fishermen."—Pyrard, pp. 277-8.

"[The Mukwa] of North Malabar follow the rule of descent *a matrice*, but those in the South allow descent of property to sons."—Balfour's 'Cyclopædia of India,' Vol. III. Madras, 1873.

(5)

Wreck of the Ravestein."

WRECK OF THE "RAVESTEIN" (OR "RAVENSTEYN").—This Dutch vessel struck on a reef of the Máldive group, May 9th, 1726, when outward bound with a valuable cargo of gold. The Captain (Anthony Klink) and crew reached Málé (Sultan's Island), and were ultimately enabled to return to Ceylon with the gold chests and other property recovered from the wreck.

The attendant circumstances are well brought out in the following quaint, but forcible, letter of the Máldive Sultan:—¶

A' Messieurs Les Gouverneur et Conseille des ville et forts et depandances de La Conpagnie dollande en Celon,
A Colombo.

Messieurs par la voy des deux batiment qui ont partie de ce port leune le 8e et lautre le 9e de Juin, vous auré Jecroy ressus les deux lettre que Jay eu honneurl de vous ecrire, avec ausi les equipaze du vessaux Le Rauestin, qui comme je vous ay déja marqué sestois perdue daus ces Illes Jay, le Capitainne duquel vessaux enuoya tous le de monde, tous fort mal, en cette Ille, et me fit demander par le Commandeur quil auoit enuoyee avec ces gens des battaux pr pouuoir sauuer, si il estoist posible les effait de La Conpagnie, se quil ont fait de 9 caice neuf caice castée** des seau de La Conpagnie les ql mon éttée remie en mon Ille par Mr Busch, comme Jay

* Letter from the King of Portugal to the Viceroy, dated Lisbon, February 6th, 1589.

† Rivara (*Viagem de F. Pyrard*) quoting Padre Lucena's 'Life of Francisco Xavier.'

‡ Letter from the King of Portugal to the Viceroy, dated Lisbon, March 8th, 1589.

§ *Idem*, dated Lisbon, January 12th, 1591. ‖ *Idem*, dated Lisbon, February 13th, 1597.

¶ The French is an exact transcript of the original. ** *Castée* for *cachetées*.

deja eu lhonneur de vous marquer, les ql Jaurois eu deja le soin de vous les enuoyer si les de Sr Busch y eut consentie, mes il me fit reponce quil ne pouuoit y consentir, que le Capitainne ne fusce prejant sequi na ettée que le 13e de ce mois Juin, le de Capitainne ayant restée dans lille de Matteuarie pres landroit ou sest perdue le vessaux tous ce temps sans auoir rien fait que je puisse connettre estre pr le seruisce de La Conpagnie, se pleignant fort des abittans* de la de Ille comme sil douoit trauaillé commes des Mattele durope ne considerant pas que sont de pauure gens, les quels consider le moindre petie seruice quon exzize,† deux pr vne tres grandre opression Il est assée Messr a votre connessance sequo ces que les gens des Illes de Maldiue.

Insi Messr vostre Capitainne nauoit aucun droit de se seruir des terme, et mouuemant dont il sest seruie a son ariuée a Maldiue deuant tous le Conseille, deune manier comme sil vencit fair la guer, et a son ariuée Jay ettée plus informée que tous se temps il nauoit veritablement rien fait pr le seruice de La Conpagnie nayant aportée que des guenille.

Ausitot que le de homme fut deharquée il me fit demander 50 hommes auec 4 grand battaux pr sauuer les effait de la Conpagnie, sequi me parue si extraordinair que Je ne luy fit point reponce Quar Messr il faut que vous sachiez que le vessaux est essouée dans vne androit aupres duquel il ne peut y aller quauec penne vn petie battaux leaux et le brigant passant passant par desus le vessaux, et dans cette moisson duv:‡ les mer son affruze dans cette androit.

Si Mr le Capitainne auoit voulue se donner vn peu peux plus de penne dans le commancement que le vessaux at ettée essouée on auroit Je croy sauuer quelque choze dauantage, mes Je vous auoüe cette vn brutalle qui ne prand conseill de personne, se qui á fait quil à resté dans de temps en cette Ille, Il poura vous rander contte de ce quil y á fait Je suie persuadée quil donne toutte la fautte a mon gouuernement, Ces la reconnessance que je resoit de ce brutalle le quel Je vous jur Messr que si senestoist et lestimme et respect que Jay eu et moy et mes entecesseurs pr La Conpagnie je laurois mie dans vne androit ou il auroit pue a loizir santir les insolance de sa brutalittée. Je nignor nullement Messr que ce de Capitainne ne vous assurrera quil est possible de pouuoit sauuer les effait de la Conpagnie, et que indubitallemt il ne vous fasce fair des pance§ tres inuttille quar jè vous assur de rechef que dans la situation ou est le vessaux, il est impossible de rie fair a moins que le de vessaux ne sonnre;‖ quoy puisce sauuer les marchandize qui pouront flotter, si le temps permait au battaux de restter dehors et les marchandize pezante que pouront rester au font, la Conpagnie poura fair les deligence si elle juge a propos pr les sauuer denuoyer des occazion dans la moisson de feuuerir et mars quant de ma part Je vous assur, que si le vessaux sonnre,‖ et quil y est des marchandize qui flotte comme je vous marque sy deuant, et que nos battaux puisce tenir la mer Jaurie soin den fair vne exacte recherche pr vous les ranuoyer a la premier occazion.

Le 18e de ce mois des Juin le de Capitainne en Conpagnie de quelquevn de ces officiers sont venue a la porte de mon logie auec vne arogance qui ma Je vous assur outré au derniée point, Je vous le repette Messr si cenestoist les raison que jay deja ecrit sy deuant, il leurs seroit ariueé vne tres mauuais affaire esperant que vous me donnerée la satisfaction qui est a vn Roy.

Pretendant que Je lui eus remie cinq hommes quil dit luy manquer, ne mayant pas donné connessance dans la partie des 2 premiée vessaux quil manquoit, Comment pouuoire scauoir, si il estoist partie ou non, ou sil auoit restée dans le pay¶ Mes enfin Messr Jay voulue passer tous sans bruit a vos consideration, Je luy fit fair vne reponce pr luy fair autrer en luy meme quil deuoit bien considerée la mannier dont il parloit et des sestte dont il se seruoit, Sependant si ces hommes estois sur la terre, Je les ferois randre, et de plus que Jauois 3 batiment en rade sur lequl il pouuoit en fair la cherche, se que sepandant il na voulue fair, et a retrouuée ces gens sur le vessaux de la Conpagnie de france auec le Capitainne duql il y a plusr parolle que Je nay point seeu.

Je vous ranuoy Messr le de Capitainne auec Mr Busch duql Je suie tres contant, pr estre veritablemt vne homme fort brudant, Le restant des officie vont jointement auec les 9 caice de La Conpagnie qui mauoit ettée remie par le de Mr Busch, le toutte enbarque sur mon nauir lequl pr cet effait na pas eu le temps de dechargée, et suie obligée de le fair partir dans cette ettat pr au plutot vous donner la satisfaction de reseuoir et les gens, et les effait de La Conpagnie.

Vous mobligerez sansiblement de procurer au Nacoda de mon vessaux nomme Mamot Safie la vantte de la cargueson du nauir parse que luy meme en estoist chargée des Bingalle, et pr vniquement randre seruisce a La Conpagnie Je la fait partir dans le meme ettat pr y repasser tous generallemt se que Jay eu lhonneur de vous marquer sy deuant ausitost que la vantte de son rie

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* *Abittans* for *habitants.* † *Exzize* for *exige.* ‡ *Duv:*—a doubtful contraction.

§ *Des pance* for *dépense.* ‖ *Sonnre* for *sombre.* ¶ This sentence is very involved.

sera finie faites moy la grasce Messr de le depesché pr Bidgalle le plustost que fair se poura pr ne point perdre son passaze Ces la grasce que vous demande Ce Luy qui veritablement soit estre vtille a La Compagnie.

Et suie veritablement
Amy
YBRAIMME CHICONDAR
Roy De Larchipelle des Ille De Maldiue.

Seal of S. Ibráhím Iskandar.

Translation.

"To the Governor and Council of the Towns, Forts, and Dependencies of the Dutch Company in Ceylon, at Colombo.

"GENTLEMEN,—BY the opportunity the two vessels afforded, which left this port on the 8th and 9th June respectively, I presume you have received the two letters I have had the honour to address to you, together with the crew of the vessel "Ravestin," which, as I have already mentioned, was lost among these Islands. The Captain of the vessel sent the whole of the crew in a wretched condition to this Island, and, through the Commander whom he had sent in company with the crew, asked from the boats to save, if possible, the effects of the Company. This they have done as regards nine chests marked with the Company's seal, which have been delivered to me in my Island by Mr. Busch, as I have already had the honour to inform you. I should ere this have taken care to send you these, had Mr. Busch consented, but he told me that he could not give his assent to it unless the Captain were present. This did not occur till the 13th June, as the said Captain had remained in the Island of *Maḍuvari*,* near the place where the vessel was lost, doing nothing the whole time, as far as I can ascertain, for the benefit of the Company, (but) complaining bitterly of the inhabitants of the said Islands, as if they could be expected to work like European sailors —not taking into consideration the fact that they are only wretched creatures who look upon the smallest service exacted from them as a grievous oppression. You are well aware, Gentlemen, of the nature of the Máldive Islanders.

"Accordingly, Gentlemen, your Captain had no right to make use of the terms, nor to resort to the actions he adopted on his arrival at *Málé* in the presence of the whole Council, just as though he had come to wage war. Since his arrival I have been further informed that the whole time he has actually done nothing for the Company's benefit, having only brought away some rubbish.

"As soon as this personage landed, he demanded from me 50 men and four large boats to save the property of the Company—a request which appeared to me so extraordinary that I gave him no answer. For, Gentlemen, I must tell you that the vessel is cast away on a place to which a small boat can approach only with difficulty, as the seas and the surf break incessantly over the vessel, and during this monsoon especially there is a terrible sea running at the spot.

"If, Gentlemen, the Captain had chosen to give himself a very little more trouble at first when the vessel was wrecked, some more property would, I fancy, have been saved; but, I assure you, this is a churl who will take advice from nobody, as proved by his staying so long in that Island. He will be able to render you account of what he has done. I feel convinced that he lays the whole blame on my Government. It is all the thanks that I shall receive from this churl, whom, but for the esteem and regard that both I and my predecessors have borne towards the Company, I should, I swear to you, have placed in a position where he would have had leisure to see the insolence of his outrageous conduct.

"I am very well aware, Gentlemen, that the said Captain will assure you that it is possible to be able to save the goods of the Company, and that, doubtless, he will cause you to incur very useless expense; but I tell you once again that in the place in which the vessel lies it is impossible to do anything unless she breaks up. In that case the cargo which floats might be saved if the weather allows of the boats remaining outside; and, as regards the heavy goods which would sink to the bottom, the Company, if it thinks fit, might endeavour to send over (workmen, &c.) at opportune times during the monsoons of February and March for the purpose of saving them. For my part you may rest assured that if the vessel breaks up and any of the cargo floats, as I have told you before, and our boats can keep the sea, I shall take care to make a careful search so as to send (it) to you at the earliest opportunity.

* As the "Ravestein" struck on a reef in lat. 3° 4′ N., this must be the island adjoining *Digguru* in Mulaku Atol.—See Admiralty Chart.

"On the 18th June the said Captain, accompanied by one of his officers, came to the gate of my Palace with an amount of arrogance which, I assure you, exasperated me to the last degree I repeat, Gentlemen, that if it had not been for the reasons I have stated above, it would have fared very badly with them. I trust that you will render me the satisfaction which is due to a Sovereign.

"He alleged that I had sent away five men, whom he said he missed, without having let me know at the time the first two vessels left that they were missing. How could it be known whether they had gone or not, or if they had staye l in the Island? But, briefly, Gentlemen, it was my desire to let all pass without making any fuss, out of consideration for you. I had an answer given him, calculated to bring him to his senses, that he ought to consider the manner in which he spoke and the terms he employed, at the same time that if these men were on shore I should have them sent back to him; and, moreover, that I had three vessels in harbour which he might search. This he did not chose to do, (but) he found his men on the ship of the French Company, with the Captain of which he had many words unknown to me.*

"I send back, Gentlemen, the said Captain and Mr. Busch, whom I am satisfied undoubtedly possesses much prudence. The rest of the officers leave also with the nine chests belonging to the Company, which had been sent to me by Mr. Busch.

"The whole have embarked in my ship, which, on this account, has not had time to discharge; and I am forced to let her start in this state the sooner to afford you the satisfaction of receiving the men and the effects of the Company.

"You will materially oblige me by enabling the *Nákhudá* of my vessel, named *Mahmúd Sháfa'i*, to sell the cargo of the vessel; because it was loaded from Bengal, and, merely to do a service to the Company, I ordered him to start in the same condition to enable all (your men, &c.) to return together, as I have had the honour of mentioning before. As soon as the sale of the rice is concluded, do me the kindness, Gentlemen, to despatch him to Bengal as early as you possibly can, that he may not fail in making a passage. This is the favour that he asks from you who may be of real service to the Company.

"Your sincere friend,

"IBRÁHI'M ISKANDAR,

"King of the Máldive Archipelago."

The concurrent testimony of the chief mate, Johan Busch, leaves no doubt of the magnanimity displayed from first to last by Sultan Ibráhím. Those of the crew who reached "*Maldiva*" [*Málé*] were "hospitably received by the King, who supplied them freely, as far as the resources of the country allowed, with rice, fish, and occasionally, flesh." "We met with every possible attention," writes Mr. Busch, "from the King. As soon as news of our stranding reached His Majesty, he was pleased to despatch two special men to the island of '*Mattuary*' [*Maḍuvari*] to render any help we needed in boats, provisions, and other requisites."†

Governor Vuyst, in replying to the Sultan's letter, expressed his "hearty thanks for all the aid afforded and kindness shown" to the Dutchmen, admitting "the generous and kindly spirit" which had ignored the unruliness of the Captain.‡

(6)

The French on the Máldives. A.D. 1754.

THE FRENCH ON THE MÁLDIVES, 1754.—The following is the letter of the French Corporal. Le Termellier, to the Dutch Governor:—

"A Monsieur le Gouverneur de Colombo.

"MONSIEUR,—Jay lhonneur de vous écrire pour vous marquer que la protection que Monsieur Le Marquis Duplaix a accordée aux Maldivois nous ont obligés a mettre notre pavillion sur ses Isllcs et dy garder des troupe: La rareté des vivre icy moblige à vous envoyer deux homes [?] pour ächeter quellque pipe daraq et autre vivre Jespere Monsieur que vous voudrez bien ordonner qu'on ne les inquiette point et que vous voudréz bien les aider et vous obligeré celuy qui a lhonneur d'estre avec respect.

"Monsieur

"Votre tres humble et tres obëissant seruiteur

"A Maldive, le 20me Aoust, 1754." "LE TERMELLIER.

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* The anomaly of the Sultan employing the French language, as well as the bitter tone of the letter, are thus easily accounted for. The French were much in favour at the Máldives at this time. *Vide supra*, p. 31, and Journ. R. Geo. Soc., Vol. II., p. 78 (1832):—"Upon our showing *French* colours, a Máldive boat came alongside and supplied us with some fowls." (Log of the 'Rochester,' February 20th, 1716, in lat. 3° 52′ N.)

† Two letters (Dutch) dated *Maldiva*, June 7th, 1726. ‡ Letter dated Colombo, January 7th, 1727.

THE MALDIVES.

HISTORICAL SKETCH.

Notes.

Translation.

"To the Governor of Colombo.

"SIR,—I have the honour to write to you to point out that the protection which Monsieur Le Marquis Duplaix has granted to the *Maldivois* has obliged us to hoist our flag on these Islands, and to station troops there. The scarcity of provisions here forces me to send you two men [?] to purchase some kegs of arrack and other provisions. I hope, Sir, that you will be so good as to give orders that they may not be molested, and that you will kindly assist them. In this you will oblige him who has the honour to be with respect,

"Sir,

"Your very humble and very obedient servant,

"Málé, August 20th, 1754." "LE TERMELLIER.

It is to be hoped that the Frenchmen were not in very urgent need of the required supplies, as the reply of the Dutch Governor (J. G. Loten), acceding to the Corporal's request, is dated February 11th, 1755.

(7)

'ALÍ' RÁJÁ OF CANANORE.—The chief male representative of the Cananore Máppi||a family always bore the honorific title *'Alí Rájá* or *Adi Rájá—i.e.*, "Prince of the Sea."*

'Alí Rájá of Cananore.

Cananore *(Kannanúr)*, originally "included in the kingdom of the Kolástri or Cherakál Rájás," and partially feudatory "till the invasion of Haidar 'Alí,"† had become, by the middle of the 16th century, the chief seat of the Máppi||as and a Muhammadan state of some importance on the S.W. coast of India.

Pyrard, writing *circa* A.D. 1613 of "the Malabars of Cananore," mentions that they had not long before thrown off their allegiance to "the Nair King" and set up one of their own. "This King of Cananore is very wealthy, and very powerful, for his subjects are numerous, including, if need be, the other Malabars who live along the whole coast. He is called *Aly Ragea*, and is a Muhammadan as are the other Malabars. Owning many vessels he is strong on the sea, and for the purposes of trade in India has many agents and factories."‡

The Lakkadive Islands *("Les isles de Diuandurou")* belonged to him,§ as well as some thirty of the Máldives,|| and the Suzerainty over the entire group. "He is very courteous, benevolent, and affable, and, above all, he is fond of strangers. The Portuguese are at peace with him, and are allowed to occupy a small fort in Cananore where they have a church and College of Jesuits.¶ The other Kings of India, however, do not style the Ruler of Cananore 'King,' asserting that his title has accrued by force alone."**

A century later "Adda Rajah," according to Captain Hamilton, could, "upon occasions, bring near 20,000 men into the field." His "dominions" then reached "10 miles southward of Cananore to the Tellicherry river," near which was his harbour, "Dormepatam."‡‡

The particular 'Alí Rájá who captured the Máldive Sultan in 1753, supported the English cause against the French in Southern India. A treaty of offensive and defensive alliance between 'Alí Rájá and Thomas Hodges, Chief of Tellicherri, on behalf of the English East India Company, was concluded in 1759. The Máppi||a Chief bound himself to assist the Company "readily with 300 men (or more if necessary) armed with my firearms at all times" upon request and upon similar payment as that received by other English troops. In consideration of the immediate loan of 13,000 rupees (Bombay silver), pepper to that value was to be delivered, at the price contracted for by the English with their own merchants, between January and March, 1760;

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* Aitchison's "Treaties, &c., relating to India," Vol. V., p. 346. Calcutta, 1864.

† Hunter's "Imperial Gazetteer of India," Vol. II., Art. 'Cannanore.' London, 1881.

‡ Pyrard, p. 322. § *See* Note (10) "Lakkadive Islands."

|| Ceded about 50 years previously [*circa* A.D. 1560] by a Máldive Sultan in return for aid against his revolted subjects.—Pyrard, p. 233.

¶ The Portuguese landed at Cananore A.D. 1498, and erected a factory A.D. 1505. The Dutch followed in A.D. 1656, but sold their fort about A.D. 1756 to 'Alí Rájá, whose avarice Haidar 'Alí had to curb. (M. M. D. L. T. "History of Hyder Shah," p. 101.)

** Pyrard, pp. 322-3.

‡‡ "A New Account of the East Indies," Edinburgh, 1727.—Pinkerton, Vol. 8, pp. 368, 370. At the present day the territory of the Rájá extends nowhere more than two miles from the *glacis* of the fort.

in default, the Company to have free liberty to take the Rájá's vessels to the amount of the said debt.*

In 1766 'Alí Rájá instigated Haidar 'Alí to his successful invasion of Malabar, and was entrusted with the management of all the conquered states from Cherakál to Cochin, except Cochin, Coringot, and Randeterra.†

On the capture of Cananore by the British in 1784 the Bíbí became tributary to the East India Company. It was taken again in 1791, and has since remained in British hands.‡

In the Cananore family, as usual in Malabar, the succession goes in the female line. "The last [male ruler] was succeeded by his niece, whose husband died during the siege of Cananore in 1790. This lady was succeeded by her daughter and granddaughter. The last died in October, 1861, and the Madras Government, mistaking the rule of succession, which requires that every heir must be descended immediately from a female, and imagining that females only could succeed, recognised her distant female relative to the exclusion of her son. But on the appeal of the son, Ali Rajah, and after further investigation of the case, his right to the succession was recognised."§

The *Máppiḷḷas*‖ (vulgarly *Moplás)* are all Muhammadans and descendants of Arabs who traded to or settled in Malabar from the 9th century.¶ The lax morality of the Indian women—particularly Tiyatti—favoured such casual or permanent connection with foreigners. "In the course of time the settlers, their descendants, and converts, became a power in the land.....adding much by the industry to the material wealth of the country, and not a little to its social and political difficulties. To the arrogance of the strictly honest and austerely religious Nair, the Moplá—ignorant, bigotted, priest-ridden—opposed fanatical hatred, and, when driven beyond bearing [by agrarian grievances], open outrage and murder. Things are better now than they were. English rule has done much: the Moplá knife perhaps something: special legislation more than all."**

The Máppiḷḷas are all fine, sturdy, good-looking men, and, as a community, the most enterprising and industrious race to be found anywhere in India. Though disinclined to seek public service, they can prove themselves intelligent and hard-working.

The Labbays of the South-east Coast of India, the Moors of Ceylon, and a large proportion of the Máldive Islanders†† in the Atoḷs as far south as Málé, have sprung from an origin similar to that of the Máppiḷḷas of Malabar.

(8)

Fate of S. Muhammad Ghiyás-ud-dín.

THE supposition that Sultan Muhammad Ghiyás-ud-dín met this violent death at the hands of his subjects should be received with much caution. The tradition "vaguely current" at this day rather favours the belief that it was a younger brother of Sultan Muhammad 'Imád-ud-dín Mukkarram, named *Sayyid Kaḷu Baḍára*, who thus perished. This Prince is said to have shared the captivity of the Sultan in India, and to have obtained possession of the throne on returning to Málé after an absence of some years. The two sons of Sultan Ghází Hasan 'Izz-ud-dín were thereupon banished to the Southern Atols. But during the *Hajj* of Kaḷu Baḍára, Fáruná Kilage-fánu, who had been banished with the ex-Sultan's sons, re-visited Málé and devised the scheme for the restoration of the former line (by the murder of the pilgrim Sultan), details of which Christopher relates. Fáruná then merely held the reins of government until the Princes could be recalled from their exile.

(9)

Wreck of the "Europa."

WRECK OF THE "EUROPA."‡‡—The facts of this case present features in many respects strikingly similar to those connected with the "Ravestein," a century earlier.

The British vessel "Europa," Captain J. Alwayn, apparently laden with arms, struck on a reef among the Southern Atols, May 23rd, 1812. Upon news of the disaster reaching Sultan

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* Aitchison's "Treaties, &c.," Vol. V., pp. 357–8.

† Hunter's "Imp. Gaz. of India," Vol. VI., Art. 'Malabar'; Aitchison's "Treaties, &c.," Vol. V., p. 344.

‡ Hunter's "Imp. Gaz. of India," Vol. II., Art. 'Cannanore.' § Aitchison's "Treaties, &c.," Vol. V., p. 317.

‖ Perhaps from *má*, 'mother,' and *piḷḷai*, 'child.' (Wilson.)

¶ Il est bien certain qu'ils sont venus d'ailleurs, et on dit d'Arabie, mais il y a bien long temps."—Pyrard, p. 321.

** Hunter's "Imp. Gaz. of India," Vol. VI., Art. 'Malabar.'

†† Buchanan ("A Journey through Mysore, Canara, and Malabar," Jan. 12, 1801.—Pinkerton, Vol. 8, p. 745) observes that the Máldivians and their Sultan are "Moplays."

‡‡ Sultan's letters. The originals are unfortunately not forthcoming, and the translations (undated) must have been made by a native little acquainted with English.

THE MÁLDIVES.

HISTORICAL SKETCH.

Notes.

M'uín-ud-dín, he "was pleased to despatch a *gundara dhony* from Maldive [Málé] to the rock the ship struck against," but the Captain and crew, including three women, had meanwhile started in another *gundara* for Málé, 300 miles distant.

On their way they foraged for supplies in the most reckless manner, shooting fowls and plucking cocoanuts wherever they landed. From one island 200 fowls were forcibly carried off after one of the natives had received a slight gunshot wound.

They were, nevertheless, landed at Málé with honours. "The colours were hoisted and a salute of guns fired from the fort. The Captain was provided with a house adorned with white cloth and every necessary article, &c.;" and the lascars quartered "in a suitable place and fed there properly." Before a vessel could be prepared for their conveyance to the Coast, the Captain and lascars had commenced an unseemly and serious quarrel in which blood was spilt—the latter demanding arrears of pay and their discharge, whilst the former insisted on their returning to the wreck and making some attempt to recover the cargo. The Vizier, appealed to by both parties, was in dispair—"If neither of you will agree to deliver up your arms, what can I do?" The lascars had ultimately to be deprived of their arms. They then "began to trouble the Maldive Island as they had done the other islands, by seizing fowls, plucking young cocoanuts, breaking the olas with which the verandahs are covered, and letting dogs bite the inhabitants about the streets. The Pilot of the ship at 12 o'clock in the night had the audacity to enter the Sultan's Palace, but was stopped by the sentries and ejected. "The inhabitants, indeed, would not have been so patient if they had not thought that it was an honour to the Sultan, and the Sultan suffered himself to be thus treated merely for the sake of His Britannic Majesty."

The people came in a body before the Sultan, "and asked if it was proper that their country should be troubled by lascars, who were fed by the Sultan himself. The Sultan, however, pacified them."

Upon a complaint of killing a sheep, the Captain and Pilot, although summoned at "three different times," refused to appear before the chiefs, "observing that if they had anything to say to them they should come to their lodging." They were then rightly arrested, and the charge, though basely denied, having been clearly proved, were committed to prison for "two days and two nights," and, after 15 days' surveillance "in a suitable house," "allowed to live in their former lodging."

The Captain and other Europeans reached Galle in a Máldivian vessel on August 18th with some of the cargo, which had been recovered from the wreck by the natives under the Sultan's orders. It is satisfactory to find that the Governor (Sir R. Brownrigg) expressed his concern for the misconduct of the officers and men of the "Europa" and his "best acknowledgments" of the Sultan's action.* The Provincial Judge at Galle was at the same time directed to hold a searching inquiry, calling upon the Captain "to answer distinctly to every particular of the charges."

(10)

The Lakkadives.

LAKKADIVE ISLANDS†—(*Laksha Dwípa*, 'the Hundred Thousand Islands'; also called the *Diri* or *Amindivi* Islands)—14 in all (9 inhabited, 2 uninhabited, 3 open reefs)—lie between lat. 10° and 14° N., and long. 71° 40′ and 74° E., about 200 miles West of the Malabar Coast.

The Islands, generally situated at the East end of coral reefs (which enclose on the West perfect lagoons), are from 2 to 3 miles in area, and only 10 to 15 feet above sea level. The surface soil being naturally barren, spontaneous vegetation is scanty. The cocoanut thrives well. In formation the soil differs little from that of the Máldives.‡ The well water is said to be not very wholesome. Climate healthy. Leprosy prevails, but the ravages of small-pox have been greatly minimised by vaccination, &c. Hurricanes occasionally visit the Islands, notably the storms of 1847 and 1867, which caused great loss of life. There are few animals, except rats which are a pest. Fish and tortoises are abundant.

These Islands (as distinct from Minakaí) were conferred in *jágir* on the Máppilla Chief of Cananore (*circa* A.D. 1550) by the Cherakál Rájá, subject to certain dues which were regularly

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* Governor's reply of October 15th, 1812.

† Almost entirely extracted from the Article in Hunter's "Imp. Gaz. of India," Vol. VI., London, 1881. See too an interesting account of the group by Allan Hume in "Stray Feathers," Vol. IV., pp. 413–483, Calcutta, 1876.

‡ *Vide ante*, p. 2.

Notes.

rendered to that State until the invasion of Haidar 'Alí. At the commencement of the 17th century the Lakkadives enjoyed a flourishing trade with India.*

After the storming of Cananore by the English in 1791, the Islands were sequestrated for the benefit of the East India Company. In 1799 the Bíbí obtained a remission on the tribute fixed by the Agreements of 1793 and 1796, reducing the *peshkash* to Rs. 10,000—at which amount it still remains. The Northern portion of the group is attached to the Collectorate of South Kanara: the remainder belongs to 'Alí Rájá, but was sequestrated for arrears of revenue between 1855 and 1860, and again in 1877, and placed under the direct administration of the Collector of Malabar.

South Kanara Islands.	*Cananore Islands.*
Amini or Amindivi.	Agathi.
Chetlat.	Kavarathi.
Kadamat.	Antrot.
Kiltan.	Kálpeni.
Bitra—uninhabited.	Minakaï.
	Suheli—uninhabited.

Total population in 1871, 13,495. The Kanara Islands are managed by a Sub-Magistrate and *munsif*: the Cananore group by *amins* (revenue agents). The Islands are from time to time visited by a European Officer.

The Islanders pay no land revenue, but in lieu the Government retains the *coir* monopoly—requiring the whole of this—the staple—product to be brought over to Mangalore, where it is paid for at fixed rates, somewhat below the market value. Payment is made partly in rice and partly in money, and, as the Islanders enjoy certain advantages with regard to salt, &c., the arrangement is still popular with them. Constant change of price and the exaction of other imposts by 'Alí Rájá has for years caused discontent and evasion of the monopoly by the Southern Islanders.

In Minakaï a more profitable arrangement for the tenantry exists, and few, if any, monopolies are enforced.

The people are all Musalmáns and, like the Máppillas, of Hindu descent; they are of a peaceable disposition, with no little aptitude for self-government, and submissive to their own headmen. Monogamy is universal. The language of the group (Minakaï excepted) is Malayálam, written in the Arabic character.† The Islanders are bold seamen, and own 184 large and 719 small boats. The almost sole industry is the preparation for foreign sale of coir. Chief exports: coir, cocoanut, copra, and jaggery; total annual value about £17,000.

(11)

Presents.

PRESENTS.—According to universal Oriental custom the tender of presents has always formed a necessary part of the ceremonial attending the annual Embassy from the Máldive Sultans, and is significant of their feudatory relationship with the Ceylon Government. It would be a departure from established usage for the Governor to receive the Ambassador with the Sultan's letter unaccompanied by presents. Thus in 1846 audience was denied the Máldivian Envoy until the presents (which had been accidentally left behind) could be brought from Galle.

(Colombo) A.D. 1645-6.

On the occasion of the first recorded Embassy to the Dutch (A.D. 1645) from the Islands the return presents voted to the Sultan "to gain his friendship" (*ten eynde zyne vrundshap daar door mogen genieten*) were limited to two pieces and three rolls of satin.‡ The nature of the Sultan's presents at this time may be gathered from the list of those received the following year (A.D. 1646):—

5 *bhar* [480 lb. the *bhar*] of fine coir.
12 Do. [do. do.] of coarse coir.
63 *parras* [40 lb. the *parra*] cowries, and some dried fish *(commelmas)*.

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* "Ces *isles de Diuandurou* sont habitées de Malabares Mahometans, qui sont presque tous riches marchands, qui font un grand trafic par toute l'Inde, et specialement aux Maldives, dont ils tirent quantité de marchandises, et ils ont là des facteurs qui n'en bougent."—Pyrard, p. 233.

† "Ils ont les mesmes coustumes et langues que ceux de Cananor, de Calecut, de Cochin, et autres Malabares." —*Idem*, p. 233.

‡ Dutch Records (Summary of Resolutions of Council, Galle, December 21st, 1645).

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In return for these the Sultan wished to obtain two cannon with ammunition, some grenades, and the loan of a Dutch gunner for a monsoon. The Council, however, decided to send instead, with profuse excuses, the following :—*

	Rds.		Rds.
3 pieces satin (at Rds. 25 each) -	75	3 "grasshopper-guns" *(sprinkhanen)*	15
1 piece double red damask -	40	1 match-lock *(lontroer)*, inlaid with silver -	25
1 Japanese lacquered cabinet -	34	6 Ceylon mats -	6
6 muskets, with ammunition -	18	Rds.	231
6 fine lacquered pikes -	12		
6 grenades - -	6		

A.D. 1688.

Forty years later (1688) the Sultan sent :—†

2 cloths of silver, ornamented with gold and silk flowers.
2 Máldive mats.
2 Máldive turbans.
1,000 dried fish.

These were reciprocated by a present chiefly of spices,—the form it has continued to assume up to the present time :—

10 lb. (each) cloves, mace, and nutmeg.
50 lb. cinnamon
100 lb. Bengal powdered sugar.
10 yards red cloth.

A.D. 1706.

In 1706 the Sultan's presents were :—‡

1 female dress *(patta)* woven with Chinese gold thread.
3 pieces of Bengal cloth.
2 Máldive belts.
2 women's gowns *(rocken)*.
1 small piece ambergris.
1 piece of a sea cocoanut, "used for medicine."

The Dutch promptly sold all these "trifles" *(kleynigheden)* by auction to the highest bidder.

Ambergris and sea-cocoanut.

This seems to be the first record of *ambergris* (M. *goma, mávakaru)* and *sea-cocoanut* (M. *távakárhi)* being included in the presents. The practice was continued for more than a century at Galle,§ and is still in vogue at Colombo, where the Ambassador yearly hands over two tiny bags containing pieces of these rare and highly valued sea products with the envelope covering the Sultan's letter. The weight of the ambergris and sea cocoanut varied from Rs. 1 to Rs. 2½.

The same year Governor C. J. Simons returned :—‖

1 pair green Persian shoes.	3 lb. mace.
5 large bottles rose water.	10 „ cinnamon.
5 pieces red cloth.	6 „ cloves.
40 lb. sandal wood.	6 „ nutmegs, and
1 bottle camphor oil.	3 *amuṇams* fresh Galle arecanuts.

Arecanuts.

Arecanuts were specially valued by the Sultans formerly. In more than one instance when they had been omitted from the list, either accidentally or owing to their scarcity, the reigning Sultan did not fail to bring the fact to the notice of the Dutch Governor, with the result of securing next year double quantities (*e. g.*, 1776, 1790, 1792).

In 1716 the Ambassador brought from Sultan M. 'Imád-ud-dín

1 piece ambergris.	1 large canister of sweetmeat cake.¶
1 piece of a sea-cocoanut.	1 bundle Máldive sugar candy.
2 silk cloths.	2 canisters Máldive pancake.
2 ornamented mats.	2 jars salt fish.
2 canisters of sweetmeat cake.¶	

* Dutch Records (Summary of Resolutions of Council, Galle, December 21st, 1646).

† Dutch Records (Miscellaneous), December 4, 1688.

‡ Dutch Records (Resolution of Council, Colombo, June 27th, 1706).

§ Bennett, "Ceylon and its Capabilities," p. 252, London, 1843.

‖ Dutch Records (Resolution of Council, Colombo, November 24th, 1706).

¶ The general Máldive term for these various sweetmeats is *avuru* (S. අවුරුදු, *avuru pat*).

It was customary during the latter part of the reign of Sultan M. 'Imád-ud-díu and the commencement of that of his son Sultan Ibráhím Iskandar, for the wife, sister, or daughter of the Sultan to occasionally supplement the annual present to the Governor by a smaller one to the Governor's wife—a delicate act of courtesy, the lapse of which is to be regretted. Thus in 1718 the Sultan's daughter sent :—*

1 piece of ambergris of the weight of a rupee.
1 do. sea-cocoanut do. two rupees.
2 Máldive mats.
12 boxes of Máldive cake.
2 do. of *koliappam* (sweetmeat cake).

The Sultans' presents to the Governors at this time varied little from those of 1716 Cowries and dried fish were sometimes included ; cotton and silk stuffs never re-appear.

After 1736 no regular list appears to have been kept, nor, it is believed, is one kept now-a-days. As a matter of fact, however, the presents of this day do not differ in any material respect from those of 150 years ago.†

During the whole of the 18th century the return presents of the Dutch Governors consisted almost entirely of spices—between 1712 and 1735 generally, and after 1744 always—in the following quantities (*e.g.*, 1781) :— A.D. 1781.

To the Sultan :—			
8 *amuṇams* Colombo arecanuts	43	17	8
10 lb. cloves	3	6	8
6 „ mace	3	1	0
12 „ nutmeg	2	0	8
30 „ Malabar pepper	5	9	0
6 pieces sheeting, first quality	5	4	8
5 quires small medium paper	1	12	8
16 lb. cinnamon	4	0	0
To the Ambassador :—			
3 cubits red cloth	13	13	0
⅓ piece cloth for packing	2	18	8
	f 85	3	0

Except half a cask in 1712, 1714, and 1715, arecanuts do not figure in the list between 1712 and 1744. In the latter year 8 *amuṇams* were sent, and that quantity is still given to the Sultan year by year. (Galle.)

The Sultans' presents to the Commandants at Galle, judging by those of 1773, equalled, if they did not exceed, in value, those tendered to the Governors at Colombo. For in that year at the audience the Ambassador offered the Commandant from his Sovereign :—‡

24 boxes *boṇdialuva* (sweetmeat),
1 box *koliappam* (do.)
1 box *aluva* (do.)
1 jar salt fish
1 bag of ambergris
1 do. , sealed up in white linen.

The presents of Bennett's day (*circa* A.D. 1725) were much the same.§

Between 1752 and 1792 the return presents from Galle were invariably as follows :—

3 lb. cinnamon.
½ „ (each) mace, cloves, and nutmeg.
10 „ pepper.
2 quires paper.

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* In 1720, 1721, 1723, 1724, 1726, and 1727, the Sultana, and in 1725 the Sultan's sister, made very similar presents.

† The following constituted the entire presents received in November, 1880 :—10 small boxes sweetmeat (M. *boḍi*); 1 large Máldive pancake (M. *vadun gaḍu*) ; 1 bundle *koliappam* sweetmeat, 1 jar salt fish (M. *rhi hakuru*) ; 2 bags dried Máldive fish (M. *kaḷubili mas*) ; 1 small box of assorted shells ; 10 Máldive ornamented mats (M. *tuḍu kunā*) ; 25 *koṭṭa* of cowries (M. *boli*).

‡ Dutch Records (Miscellaneous), Galle.

§ Bennett, "Ceylon, &c.," p. 252.

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The English Government in Ceylon have been no less conservative in this matter of return presents than were the Dutch, as the following comparative list will show :—

	1800.		1880.
	Rds.		Rs.
8 *amupams* arecanuts - - - -	120 0	8 *amupams* arecanuts - - - -	184 0
125 lb. sugar candy - - - - -	80 0	120 lb. sugar candy - - - - -	45 0
30 „ pepper - - - - - - - -	10 24	1½ parra pepper - - - - - -	15 0
20 „ cinnamon - - - - - - -	?*	20 lb. cinnamon - - - - - -	13 70
1½ „ cloves - - - - - - - -	7 24	2 lb. cloves - - - - - - - -	2 0
1½ „ nutmeg - - - - - - - -	9 0	6 plates - - - - - - - - - -	3 0
1 „ mace - - - - - - - -	15 0	1 silk envelope (embroidered with gold thread) for H. E. the Governor's letter - - - -	10 0
6 dishes - - - - - - - - -	3 0	2 yards broad cloth for Ambassador	20 0
5 quires gilt post paper - - -	7 24	Cost of package - - - - - - -	12 50
1 silk envelope (embroidered with gold thread) for H. E. the Governor's letter - - - -	—		
2 ells red cloth for Ambassador -	16 0		
½ piece long cloth for package -	3 0		
Rds.	271 24	Rs.	305 20

Fire-arms.

The Sultans have always been partial to gifts of fire-arms. In 1769 Sultan M. Ghiyás-ud-dín, in acknowledging a present from the Galle Commandant of two pistols with ammuniton, made a request for "a fire-lock *(snaphaan)* 6 or 7 palms long for my own use."†

Again, in 1831, Sultan M. M'uín-ud-dín reminded the Governor that he had asked to be provided with "a fowling-piece two cubits in length." A gun was accordingly sent the following year with an amusing apology, considered due to the backward enlightenment of the Máldive Ruler. "Your Highness is not to suppose," writes Sir R. W. Horton, "that the gun I send you in pursuance of my promise last year is less valuable from not being ornamented or from having been used. I have selected it because I know it to be an excellent one, worthy of Your Highness's acceptance. In England the guns which are used by persons of the highest distinction are never ornamented."‡

* Value not stated. The Ceylon Government cinnamon contract with the East India Company in 1802 made the price 3 shillings per lb. (See Bertolacci's Ceylon, p. 245, London, 1817.)

† Sultan's letter dated October 15th, 1769.

‡ Governor Sir R. W. Horton's letter dated December 14th, 1832.

V.—INHABITANTS.

PRESENT CONDITION AND ASPECT.

BRIEFLY, the whole Máldive group may be said to be peopled at this day by a civilized race of A'ryan origin, professing the Muhammadan religion, who carry on a considerable trade with British India and Ceylon.

POPULATION.

Population.

There is no means of ascertaining, even approximately, the total population scattered over the Atols. It has been roughly estimated at 150,000 to 200,000 (Charton, Vol. IV., p. 255). On the other hand, Mr. Gray (J. R. A. S. Vol. X. N. S., 1878, p. 197) thinks 20,000 would be nearer the mark. This is perhaps too low an estimate, and a total of at least 30,000 may, with more probability, be assumed. That the population was in former days larger, is admitted by the Islanders themselves, who point with melancholy significance to islands in nearly every Atol now lying waste where homesteads stood of old. It is, however, satisfactory to find good ground for the belief that the gradual depopulation —mainly attributable to the proverbially unhealthy climate—has not merely been arrested, but that from the closer connection now yearly being established with the outside world, and the increased facilities for obtaining necessaries of life, a steady reaction is setting in. The Admiralty Chart, based on the Statistical Survey of 1835, gives the number of inhabited islands as 175; the present number may exceed 200.*

The annual census mentioned by Pyrard as taken at the close of *Ramazán* would appear not to be enforced at the present day.† The causes which have brought about on the Lakkadives the large proportion in the female population‡ are not likely to affect the Máldive group. Málé (Sultan's Island) contains between 2,000 and 3,000 inhabitants.

GENERAL CHARACTER.

General character.

The Máldivians are an inoffensive, timid, but—from their isolation—naturally a suspicious people. This reserve seems to be the effect of a vague feeling of apprehension, lest information given to foreigners may be used to their disadvantage.§ When confidence, however, has been once restored, they exhibit in their intercourse with strangers an excess of inquisitiveness often positively embarrassing. Sober, fairly honest, and of a disposition naturally cheerful, they have but few wants, and are consequently inclined to be sluggish and lazy.‖

To general discretion of action they add a wise discernment in the common concerns of life, politeness and affability of manner, and considerable astuteness in matters of trade.

Above all, they are thoroughly humane and liberal in conduct. This last trait is confirmed by a long series of instances in which their "enlightened humanity" has prompted these Islanders to treat shipwrecked persons with marked kindness and hospitality, transporting them (under the Sultan's orders) in their own vessels to some port of Ceylon or the coast of India.¶

Christopher observes:—"Of the character and disposition of the natives we were impresssed on the whole with rather a favorable opinion. They are a quiet, peaceable race, hospitable and kind to strangers, though suspicious and distrustful of them. Unacquainted, indeed, with the practice of the higher virtues, but equally unfamiliar with vice in its darker forms, with desires and wants circumscribed and limited, and the means of satisfying them attainable without much labor, they have little incitement to increased

* Note (1). † Pyrard, p. 103. ‡ See Hunter's "Imp. Gaz. of India," Art. 'Laccadive Islands.'

§ Trans. Bombay Geo. Soc., 1836-8 (Reprint, 1844) p. 65.

‖ "The inhabitants of the Máldive Islands are honest and pious people, sincere in good faith, and of a strong will."—Gray, quoting *Voyages d'Ibn Batoutah* par Def. et Sang. Tome IV., 114.

¶ Vide Appendix B.

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exertion for the purpose of augmenting their productions; and hence, in all probability, the little attention paid to the improvement of their resources, and the absence of all care regarding the amelioration of their condition. The apathy and indifference evinced by them on these subjects seem, however, to result in a great measure from feelings of contentment, though of a spurious kind."

Towards each other the natives are kind and friendly, for, though usually of an indolent habit and disinclined to work, they readily assist one another on emergencies; to their kindred they are very affectionate.* The upper classes are extremely hospitable and not wanting in sociability.

In their few manufactures they display much ingenuity and expertness, whilst as bold and skilful navigators they stand, perhaps, unrivalled. "In general," says Pyrard, "the Maldivans are very ingenious. They apply themselves with great industry and success to all sorts of manufactures, and also to letters and sciences; after this manner especially to astrology, which they hold in great esteem. They are a very wise, cautious people, and very sharp in their merchandize and way of living."†

Crimes of a heinous character are scarcely heard of on these Islands, and even theft and personal violence are of rare occurrence: murder has been seldom known.

"From a phrenological examination, Dr. Campbell concluded that this favorable view of their moral disposition is not incorrect, since the organs of destructiveness and combativeness were seldom distinguishable, whilst those of benevolence and veneration are strongly developed."‡ It is only natural to learn that cautiousness and secretiveness were observed to be the most developed of all the phrenological indications. "Dr. Campbell's observations are equally favourable to their intellectual powers, among which constructiveness and order appear most prominent."‡

One of the worst features in the character of the natives is their sensuality, which is little curbed by the very severe law for checking its indulgence and extension. This vice, added to habitual idleness, has undoubtedly weakened their general constitution.§

PHYSICAL TRAITS.

Physical traits.

The physical traits of the Máldivians vary greatly, but exhibit in the main the broad characteristics both of the A'ryan and Drávidian types, though the latter certainly preponderate.

On the one hand there is the A'ryan "oval contour of face," with large bright "freely-opened eyes" more than balanced on the other by the Drávidian "flatter face, with features less symmetrical, but perhaps more expressive, at least of individuality;" the wide, short, but not ill-shaped, nose; thick fleshy lips, and excess of jaws and mouth.‖ The general expression is pleasing, and free from any trace of sullenness. Very many (chiefly among the Northern Islanders) present undeniable traces of Arab or Máppilla descent, and closely approach the "Moors" of Ceylon.¶ A small proportion disclose in their physiognomy a decided admixture of the African type, due to the occasional importation of the Zanzibár slaves in former years.**

In the Máldivian form there is in general "little symmetry," poor physique, "much dumpiness and flesh." The average height of the men is about 5 feet 2 inches.††

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* Trans. Bombay Geo. Soc., 1836-8 (Reprint, 1844), pp. 60, 66.

† Pyrard, quoted in Harris's Collection of Voyages, London, 1744, Vol. I., p. 705.

‡ Trans. Bom. Geo. Soc., p. 108.

§ Trans. Bom. Geo. Soc, p. 64. Pyrard too (pp. 141-2) strongly animadverts on the gross immorality which then prevailed on the Islands.

‖ Brian Hodgson ("Essays") on the Physical Characteristics of the A'ryans and Tamilians.

¶ "When ships arrive, those on board take wives, and repudiate them on their departure; it is a kind of temporary marriage."—Gray, quoting *Voyages d' Ibn Batoutah*, Tome IV., 125.

** Trans. Bom. Geo. Soc., p. 58. For possible traces of Malay contact with the Máldives, see Note (2).

†† Trans. Bom. Geo. Soc., p. 58. An average supported by the measurement of 24 Máldivians from six different Atols made by the writer.

INHABITANTS.

The men are commonly of a dark copper colour, but their skin is often marked by blotches of a lighter hue. At Málé some of the higher classes have a much fairer complexion, which may perhaps be attributed to descent from Persian stock.*

Without exception, the men, from the Sultan downwards, keep their heads, and usually their faces, shaved, though free to allow as much hair to grow on the latter as they like—a noteworthy departure from the custom of not three centuries back, which permitted the soldiers, officials, and those of gentle birth to wear their hair as long as the women, whilst forbidding all but church dignitaries and *Hájis* to grow beards according to fancy.†

The women are short, usually of a more olive colour than the men, much resembling in this respect the "fair-skinned Kandyans," with oval-shaped faces, regular features, and shapely figures. Clean and healthy in appearance, they are generally good-looking; some decidedly pretty. Their long hair, which they are at pains to render both thick and black by frequent washing and the liberal use of dyes and unguents, is tied high up on the back of the head.‡ Pyrard says that girls have their heads shaved once a week from infancy to their eighth year, leaving a small tuft on the forehead to distinguish them from the boys.

DRESS.

Dress.

The ordinary dress of the men consists of short drawers (M. *haruválu*), a cloth wrapped round the waist after the Siṇhalese fashion (M. *mundu*) and a plain handkerchief twisted over the head (M. *rumá*). On board their vessels and when in foreign ports, some don a thin shirt, generally white (M. *kuru libás*), and Turkish waistcoat (M. *saduriya*), which, with the peculiar coarse blue waist cloth edged with red, and the red handkerchief, mark a Máldivian at once among other races.

The upper orders and those who have been the *Hajj* wear besides the waist cloth (particularly on Fridays when attending Mosque) a kind of long dressing gown (M. *digu libás*), reaching to the ancles, somewhat similar to those worn by Muhammadan Priests in Ceylon.§ At Málé the soldiers are still required to appear in a distinctive "uniform" when on duty, viz., a waist *féliya*, with a peculiar handkerchief (M. *kachché; bolu féliya*), bound up in stiff angular shape.‖

No Máldivian not of the Priesthood now ventures to wear a turban (M. *faguḍi*) in the Royal presence or Island, this headdress being retained by the Sultan exclusively. The *Faḍiyáru*, or Kázi, and the lesser Priests wear the appropriate Muslim garb.

Like the Siṇhalese, the women wear a waist cloth, generally of native manufacture, coarse in texture, the ground of a rich chocolate colour, relieved by black and white stripes (M. *féliya*). The upper part of the body is covered by a loose-fitting red-coloured "jersey" reaching to the knees, short sleeved, and edged at the neck with silver tinsel lace (M. *libás*),¶ whilst round the high-worn *koṇḍé* is twisted a handkerchief matching the *libás* in colour,** the *tout ensemble* forming a very becoming and picturesque costume. A

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* Trans. Bom. Geo. Soc., p. 58. † Pyrard, pp. 81, 83.

‡ Pyrard, pp. 79, 80:—"Quant aux femmes, elles sont belles, horsmis qu' elles sont de couleur olinastre: et mesme il s'en trouve plusieurs ausi blanches qu' en Europe. Toutesfois elles ont les cheueux tous noirs: mais ils estiment cela beauté."

§ The dress of the men, as minutely described by Pyrard, must formerly have been richer and more elaborate, including the use of turbans, silk scarfs, gold and silver chains, and fancy knives.

‖ Cf. Pyrard, p. 123.

¶ The *libás* (Ar.) was only partially adopted in the 14th century. "Most of them wear only a cloth covering them from the navel to the ground: the rest of the body remains uncovered," writes Ibn Batúta, who was much exercised at the scandal, which, even as Kází, he was unable to abate.

** The head-kerchief is a comparatively modern innovation at Málé, and said to be still as much "honoured in the breach as in the observance" on the distant Southern Atols. Pyrard (pp. 80-1) speaks only of "une fausse perruque," which the women occasionally added to their natural *koṇḍé*, and set off with flowers and jewels. Ibn Batúta, too:—"The women of these Islands do not cover the head: the Sovereign herself does not so." (Gray, quoting *Ibn Bat.* IV., 122.)

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profusion of bangles, with necklace, earrings, and other ornaments, deck the person. The use of gold trinkets is no longer rigidly restricted to women of quality.

Girls, from the time they begin to walk until 9 or 10 years old, wear only a cloth reaching from the waist to below the knees. Boys are forced to put on waist cloths after circumcision at the age of seven. "Young children are covered with ornaments of different metals according to the wealth of their parents to distinguish them from those whose parents are poorer."*

MEALS.

Meals.

The Máldivians have nominally three meals a day—one shortly after rising, with coffee: another about six hours later, the midday meal: and the third after dark, just before retiring to rest;† but among the common folk at least it is rather the practice, as remarked by Pyrard, to observe "no set meal times, eating when their appetite provokes them."

The usual meal of the natives consists of rice (often only half-boiled) mixed with a few chopped chillies, a little fish, "fish sugar," and scraped cocoanut. This they consume in silence, even when eating in the company, and with a haste that savours of greediness. A draught of water closes the repast. Betel is universally chewed, and the *guḍa-guḍá* smoked constantly before and after meals.

For the supply of rice, their staple food, they have to depend entirely on foreign importation. Those who can afford luxuries indulge in such articles as tea, sugar, tobacco, biscuits, &c., the consumption of which has much increased since a few "Moors" and Pársí traders have opened boutiques at Málé.

The women wait on the men at meals and eat after them. Food is commonly dressed only by women-cooks (M. *badu-gé anhenun).*‡

HABITATIONS.

Habitations.

The dwellings of the poorer natives consist on some Atols of rows of huts adjoining one another on either side of the street. The walls are of cocoanut thatch or wattle-and-daub, with thatched roof. These are little better than the ordinary Tamil cooly "lines" observable in Ceylon, low-roofed and dark, but not untidily kept. This is the class of habitations on Gáfaru Island, and common also at Málé. In the Suvádiva (Huvadú) Atol the inhabitants appear to live in similar huts, a number of which stand within *kraals* or enclosures.§

At Málé the upper orders possess houses with a yard or compound attached, substantially built of wood, the posts, beams and rafters of cocoanut or the tough *kuradi (? Pemphis acidula,)* with cross sticks of *duburi (Calophyllum inophyllum).* The walls, sometimes boarded, are generally of daub, or mats; cocoanut thatch cover the roof, and the floor is plastered.

In general about 28 feet long and 12 feet broad and 15 feet high to the top of the roof, they are dark and cheerless inside, having but one window at most. A partition near the middle divides the house into two rooms, of which the inner (M. *eteri-gé; mával-gé)* is reserved for the women, and considered private, whilst the outer room is open to all visitors. In this public room (M. *béru-gé)*‖ there are two ranges of seats 2 feet high by 4½ wide; the smaller one on the right of the entrance (M. *kuḍa arhi)* is held to be the more honorable; the other (M. *boḍu arhi),* carried across the house, is left for persons of less importance. The degree of respect intended to be shown to anyone is marked by the seat to which he is invited. The various weapons used at festival sports are ranged on a rough loft or shelf overhead. Most of these houses contain a few articles of furniture, the most

* Trans. Bom. Geo. Soc., 1836-8, p. 60. † *Ibid*, p. 61.

‡ The contemptuous term *sídí* (Pyrard *cisdy*), applied to men who descend to this menial service, retains its old force.

§ *V. s.*, Note (3), p. 19.

‖ The "*mâlem*" apartment (*Ibn. Bat.* IV., 118) in which "the master of the house sits with his friends."

prominent being invariably the swinging bed described by Pyrard.* The women's apartment, as well as the entrance door, is merely screened by a curtain.

INHABITANTS.

Besides the Sultan's Palace, there would seem to be but one house at Málé built of stone or brick, faced with mortar—that of *Galolu-gé Hasan Didi*, the wealthiest Máldivian merchant. It has a pillared front verandah and tiled roof, according to the modern design commonly followed by native architects in Ceylon.†

Sultan's Palace.

The Sultan's Palace is thus minutely described by Pyrard :—"The Royal Palace is of stone, one story high, and has a great many fine apartments, without the ornaments of regular architecture. It is surrounded with gardens, in which there are great fountains and cisterns of water, walled in and paved with large smooth stones, and guarded continually to hinder people from washing in them, as being solely reserved for the King and Queen's use. The Palace is divided into several courts, each of which has a well in the middle, paved with fair white stones, and in one of these courts the King has two magazines—one for ordnance and the other for ammunition. At the Palace gate there is a guard, with many pieces of ordnance and other arms. The portal is made like a square tower, and on festival days the musicians sing and play upon the top of it.‡ Passing on from the gate, you first come to a hall where the soldiers wait, then to another great hall where the noblemen and gentlemen attend ; for none but the officers of the household, with the King and Queen's slaves or servants, are allowed to go further. The floor of these halls is raised three feet high from the ground, to avoid the ants, being neatly boarded with wood and covered with a sort of party-coloured mats which they make in these Islands. * * * * The walls are hung with silk tapestry as well as the ceiling, which has pretty fringes hanging about it. * * * * The chambers and inner apartments are hung with silk tapestry, and enriched with gold flowers and branches of several colours. * * * * Daylight is never seen in the Queen's chambers, or those of the ladies of quality; for their only light is lamps burning continually, and the place of the room where they usually retire is blocked up with four or five rows of tapestry."§

SANITATION.

Sanitation.

The Máldivians on their Atols are decidedly above the average among Oriental races in cleanliness. Not even on densely populated islands, such as Málé, are any unpleasant sights and smell encountered. "There is no filth, no pigs, and, except a little fishy odour here and there where fish is being salted and dried, all is sweet and wholesome."‖

Though much aided by nature in possessing a loose, sandy, porous soil, considerable credit is due to these Islanders for the sanitation that exists. Their compounds are kept constantly swept and clean, and the streets always present a tidy appearance. Personal cleanliness is no less attended to ; men and women bathe regularly once or twice a day.

RELIGION.

Religion.

Muhammadanism has been the accepted religion of the Máldivians for at least six centuries past, and had not improbably obtained an earlier hold on the more Northern Atols. On the evidence supplied by Ibn Batúta, Mr. Gray fixes "the probable date of the conversion at A.D. 1200." The ever-growing commercial intercourse, however, between the Máldives and Arab traders, added to the influence of the Muslim merchants settled

* Pyrard, p. 157. Cf. Yule's Marco Polo, Vol. II., pp. 282, 289.

† Another proof of the "general deterioration" noticeable on the Máldives. The Indian Navy Surveyors saw the ruins of some madrepore houses (Trans. Bom. Geo. Soc., 1836-8, p. 108), and the statement of Ibn Batúta and Pyrard make it clear that such houses were common enough in former days. "They cut the stones, each two or three cubits long, and place them in piles; then they lay across these beams of the cocoanut tree, and afterwards raise the walls with boards." (Gray, quoting *Ibn Bat. IV.*, 118). And Pyrard, (p. 89) :—"The chief men and the wealthy have them built of stone which is taken from the sea under rocks and reefs, where it is to be had in any required length and thickness."

‡ Christopher says much the same. (Trans. Bom. Geo. Soc., p. 57.)

§ Pyrard, in Harris, Vol. I., pp. 713-14.

‖ Allan Hume, on the Lakkadive Islanders, in "Stray Feathers," Vol. IV., 1876, p. 41.

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along the coast of Malabar and Ceylon from the eighth and ninth century, may well have brought about a partial religious revolution amongst the scattered Islanders some time prior to its penetrating to the court at Málé.*

Tradition assigns to a Shaikh *Yúsuf Shams-ud-dín*, a native of *Tabríz*,† the honor of being the acknowledged successful apostle of Islám on the group, and knows his first kingly convert as "*Darumavanta Rasgefánu*"—doubtless the Sultan *Ahmad Shanúrázah*, of Ibn Batúta's narrative.‡

During the few years they held the Máldives in subjection in the sixteenth century, the Portuguese, in accordance with their bigoted policy, rigorously propagated the tenets of their faith amongst the Islanders; but the foreign yoke was soon thrown off, and Muhammadanism once re-established has remained unassailable to the present time.§

Like the Musalmáns of Southern India and Ceylon generally, the Máldivians are of the *Sánni* sect.‖ "In observing the fasts and ceremonies of their religion the Islanders are very particular;" but withal exhibit a freedom and laxity unrecognized by orthodox Muhammadans. Thus, the month of Ramazán (*M. Ródá*), kept throughout as a general holiday, is characterized as much by exuberant frivolity and licentiousness as by strict religious fervour.¶ Their general religious knowledge Christopher puts at a low standard, amounting to a bare acquaintance with "outward observances" and a loose knowledge of "a few Arabic sentences."**

Mosques.

"Their temples (Mosques) are built of good stone, well cemented, and have a thick wall. They stand in the middle of square walled inclosures, where they bury their dead, except those who desire a separate sepulchre. Their temples are square, and face the west, as pointing to Mohammed's tomb. They have three doors, each of which is faced by a broad well with steps, the bottom and sides of which are lined with polished and flat stones, the floor of the temple being covered with mats and tapestry, whereas the church-yard is nothing but sand."†† Their temples are kept scrupulously clean. "The roof or ceiling is of wood, admirably well polished, and the walls are wainscoted, both of them being firmly joined without nails, pegs, or any other visible artifice. Upon the walls of the temples are large tables of stone or of wood with Arabic inscriptions. They have a particular place for the King and his Court, and galleries for the guards and separate apartments for certain dignities, qualities, and ages, insomuch that any person who takes up an improper place is fined accordingly. They constantly burn lamps, for which end certain low trees are consecrated. Some of the islands have nine or ten temples, but that in which they solemnize a general festival is built and supported at the common charge, under the name of *Oucouru mesquite* [*Hukuru miskítu*,†† 'the Friday Mosque.']"

Demonolatry and Nature worship.

Side by side, however, with Muhammadanism there has continued to exist an older creed—not the less real because disowned—in demons and spirits, spells, charms, and the like. "Of demon-worship, bali-worship, and Siṇhalese superstitions generally," says Mr. Gray, "abundant illustration is afforded by both Pyrard and Christopher, in descriptions which have their counterpart in Knox's 'Ceylon,'"‡‡ and anyone thrown in contact with the modern Islanders (particularly those of the Southern Atols) will find demonolatry and nature worship as rife as of old, if pursued now-a-days somewhat less obstrusively. They believe in the existence of spirits and supernatural beings, who

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* Note (3).

† Tabríz' tomb at Málé "is held in great veneration, and always kept in good repair."—Trans. Bom. Geo. Soc., 1836-8, p. 74.

‡ Note (4).

§ "Covetousness couched under the pretence of religion carried the Portuguese to conquer those remote countries; and the insatiable avarice of some expels and makes them esteemed less than rebels and pyrats." —Stephens' *Farta ý Sousa*, Vol. II., p. 382. See Hough, "Christianity in India," Vol. I., Chap. VI.

‖ Note (5). ¶ See Pyrard, Chap. XI. ** Trans. Bom. Geo. Soc., 1836-8, p. 74.

†† Pyrard, quoted in Harris, Vol. II., p. 707. Cf. with the *Hukuru Miskítu*, the "*Metzid Adine*," at Ardebil (Mandelso's Travels, 1637, p. 239.)

‡‡ Journ. R. A. S., Vol. X., n. s., 1878, p. 179. Note (6).

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exercise a disastrous influence on human affairs—in extraordinary phenomena, presaging calamity, and in the auspiciousness or otherwise of certain times and seasons for particular transactions.* To be well versed in astrology and "the black arts" (M. *faḍita)* is no mean distinction; some persons even gain their livelihood by writing philters (M. *tavidu)* and other charms, worn as amulets, which are much relied on.†

Buddhism at the Máldives.

On present evidence it would be unsafe to assume that Buddhism extended to these Islands. The religious books of the Siṇhalese make no mention of any mission to the Máldives; nor does it appear unlikely that no organized attempt at conversion was ever made, considering their isolation, unimportance, and, as far as is known, independence of Ceylon rule. Mr. Gray, who seems to favour the idea of its existence at some period, is bound to admit that "the traces are curiously faint." At any rate, there is little to be gathered from the customs now prevalent among the Máldivians, and in their traditions lives only a vague belief that Muhammadanism supplanted a rank form of demon worship, untempered by Buddhistic or Bráhmanical influence.‡

But as Mr. Gray aptly remarks :—"Whatever further inquiry in that direction may prove, the picture presented by the modern religious state of the two branches of the Siṇhalese family is curious indeed. The one has held to the cosmopolitan principles, the atheistic creed, and the simple worship of the Buddhist faith; the other has adopted the exclusive monotheistic, and ceremonious faith of Muhammad. These religions have not, however, altered to any extent the characteristics of the race, and both have suffered the co-existence of the older worship of demons and of the elements—a common inheritance of both branches of the family, but an alien to both their creeds."§

EDUCATION.

Education.

Children of both sexes are required to read the Kurán, under the tuition of the minor priests, from the age of three or four. When considered to be sufficiently grounded in its precepts they receive no further instruction beyond being initiated into the ceremonials of religion.‖

Christopher is at fault in asserting that a knowledge of writing is left to be acquired anyhow. "Their studies," says Pyrard, "are to read and write and learn the Kurán. * * * * They write their lessons on small white tablets of wood, and when they have got these by heart they rub out what they wrote and whiten (the tablets) afresh." He adds that the letters are drawn on fine white sand spread over these boards.¶ It would otherwise be difficult to account for the fact that at the present day the majority of the men seem to possess a fair acquaintance with the ordinary Máldive character (M. *gabuli tána)* if they had received no instruction when young.

Some who have visited India and Ceylon speak a little Hindústání, Arabic, and Siṇhalese.

MARRIAGE.

Marriage.

Marriages are not contracted very early, but a plurality of wives is allowed according to Muhammadan license. Few, however, are able or disposed to support more than one wife. Notice of intended marriage is required to be given, for which a small fee of 1 *boḍu lári* or 4 *kuḍa lári* (equal to about four cents Ceylon coinage) is charged. The bond is as lightly dissolved. Both parties need only declare before the *Katíbu* their wish to annul it. The woman is not forced to attend, provided two witnesses appear on her behalf. Among the lower orders many simply dismiss their wives without more ado. Naturally, intrigues are not uncommon, and it is said not to be held disgraceful for a widow to live unmarried with a paramour. Recognised prostitution is unknown.**

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* Trans. Bom. Geo. Soc., 1836-8, p. 76.

† See Ceylon A. S. Journ., Vol. VII., Part II., 1881, pp. 119-124.

‡ Note (7).

§ Journ. R. A. S., Vol. X., n. s., 1878, p. 180.

‖ Trans. Bom. Geo. Soc., 1836-8, p. 60.

¶ Pyrard, pp. 134-5.

** Trans. Bom. Geo. Soc., 1836-8, pp. 59, 60.

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The following details are supplied by Pyrard:—"Upon a design of marriage they address themselves to the *Pandiare* [*Faḍiyáru*] or *Naybes* [*Náibu*] who, after being sufficiently informed that things really are as they are represented, takes the man by the hand and asks him if he is willing to take such a woman on the conditions proposed, and the woman always being absent, he likewise questions her parents as to their consent. If they all agree, he marries them, and calls the bystanders to witness their consent; then the whole company waits upon the woman home, and several other persons visit her. All the visitors being entertained with feasting, music, dancing, &c., the new-married man makes presents to the King and the great lords, and the bride pays the like compliments to the Queen and the other ladies; both make presents likewise to their relations.

"But when the King is married he does not give, but receives, presents from all his subjects, viz., cloths, garments, turbans, victuals, fruit, flowers, &c., and all these presents, which arise to a great value, belong to the new-married Queen.

"A man may have three wives if he can maintain them, but not more.† * * *

"The bridegroom receives no dowry with his wife, and is obliged not only to bear the charge of the nuptial solemnity, and to maintain her, but to settle upon her a jointure equal to what her mother and other ancestors had. They are so nice on this last condition, that if the priest apprehends the husband cannot afford such a jointure, he refuses to marry them, notwithstanding both parties require it; but, after all, the bride may renounce either whole or part of the jointure, after marriage, and, indeed, that is frequently practised.

"Brothers and sisters, first cousins, and those who by way of friendship and intimacy have used to call one another by the names of son or daughter, father or mother, brother or sister, these, I say, are prohibited to marry.

"The males may marry when they will, but a female orphan cannot marry till she is fifteen years of age; indeed, if her father be alive (for the mother has no power) he marries her at ten or eleven years of age, and that to the first suitor, whether old or young, provided his quality is in some measure suitable to hers; for they reckon it a great sin to keep the daughters unmarried.

"A man may turn away his wife, but unless she consents to the separation, she may demand her jointure, though, after all, that demand is seldom made, as being reckoned a mean action, and a sign that the woman fears that her merit will never procure her another husband. On the other hand, the woman cannot part from the husband without his consent. This sort of divorce, which is very frequent, must be attested by witness, or they cannot have the benefit of a second marriage. The divorced parties frequently repent of their separation, and marry again a second, third, or fourth time."‡

BURIAL.

Burial.

The Máldivians, following the universal Muhammadan custom, bury their dead;§ but the funeral ceremonies, as carefully recorded by Pyrard, would seem to depart considerably from the burial rites usually observed by Muslims.

"In the first place, the corpse is washed by persons of the same sex, who buy that office of the King, and are paid for their service; then they are wrapped up in cotton and covered with fine white cotton cloth (which goes afterwards to the priest), the right hand of the deceased person being laid upon his ear, and the left upon his thigh. This done, the corpse is laid upon the right side in a coffin of *candou* [*kadu*] wood, and carried to the burying place by six relations and friends, attended by the women washers, who cry and howl most hideously.

"Every man in his lifetime provides for himself a burying place and all the other necessaries; nay, they are so superstitious that they will rather starve than touch the money they have laid up for that purpose.

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† Pyrard errs here. The limit is *four* wives, according to the ordained Muslim licence.

‡ Pyrard, quoted in Harris, Vol. II., p. 709.

§ Trans. Bom. Geo. Soc., 1836-8, p. 63.

"Besides the six principal mourners, the other relations and neighbours are present without invitation; and upon the march from the house of the deceased person to the grave, they scatter shells for the benefit of the poor,* to whom they likewise distribute sacks of rice and millet; at the same time they give to the priest pieces of gold and silver, the number of which is proportionable to the estate of the deceased person; and these pieces are distributed by the priest to those who have assisted in praying for the deceased person. The priests sing continually during the whole course of the ceremony, and in the procession a person of quality sprinkles the assistants with water made of sweet flowers.

"The grave is covered with a large piece of silk or cotton, which, on the interment, goes to priests of the temple. When the corpse is laid in the grave, they turn the face of the deceased person to the quarter that faces Mohammed's tomb, and then fill up the grave with fine white sand, sprinkling it with water.

"When the ceremony is over, the relations entertain all the company with victuals, and the three following Fridays they pray over the grave, where the priests sing, eat, and pray every day till the third Friday passes, after which a general feast is prepared for the relations, friends, and priests, who pretend that the soul of the deceased person is then conveyed to paradise. This feast is prepared every year, and on All Souls' Day they throw fresh white sand on the grave, and perfume it with burnt incense.

"The grave is surrounded with wooden pails, for they reckon it a great sin to walk over it. They never bury two corpses in the same place, for they have such a reverence for the bones of the dead, that even the priests dare not touch them.

"If a great lord dies, the priests sing for him a whole year, and are entertained every day with dishes of meat and betel; but if a King or Queen dies the ceremony is continued to the death of the next successor."†

"The graves of the Sultans have each a building erected over them, all of the same form, about 10 feet long, 7 broad, and 10 high, with a peaked roof, the sides being built of coral stone covered with ornamental carving, except where at intervals a smooth surface has been left for Arabic sentences. Over the entrance is hung a cloth marked with a few words written in large characters."‡

"In this country, the mourners make no alteration in their habit: only they go bare-headed to the grave, and continue so for a few days after the interment.

"Those who die fighting with persons of a contrary religion are buried upon the spot where they fall, without any ceremony; and, in regard that they are accounted holy and happy, neither the priests nor their friends pray for them.

"They never transport corpses from one island to another, and even the King himself is buried where he happens to die.

"If any person dies at sea, they wash the corpse, and put it into a coffin, which they place upon a float of candouittes wood. Within the coffin they put silver in proportion to his circumstances, and a written paper describing his religion and withal praying those who meet with the corpse to take the money and bury it handsomely."†

EMPLOYMENTS.

Employments.

"The labouring classes, exclusive of those engaged in pursuits connected with trade, follow various employments as a means of subsistence. The most common of these are fishing, gathering cocoanuts, drawing toddy, weaving cloth, and collecting the small cowries.

"The domestic duties are mostly attended to by the women." They beat out the cocoanut fibre and twist it into coir yarn, make mats, prepare breadfruit for keeping, extract oil from the nuts, spin cotton, and dye thread for the loom.§

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* Christopher witnessed the "scramble, very much out of character with the occasion," for these cowries, during the funeral procession of the Sultan's grandmother at Málé.

† Pyrard, in Harris, Vol. II., p. 709.

‡ Trans. Bom. Geo. Soc., 1836-8, p. 63.

§ Trans. Bom. Geo. Soc., 1836-8, p. 61.

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The liberty enjoyed by the women is remarkable. Though their apartments are considered strictly private, they are not kept from the view of strangers nor now debarred from openly walking abroad unveiled in the daytime.* In every respect their status would appear to compare favourably with that of Muhammadan women in India and Ceylon.

RECREATIONS.

Recreations.

It may be said of these Islanders with much truth that they 'take their pleasures sadly.' They appear to have few games or other forms of amusement, and even these are carried through mechanically and with little zest.

Fishing.

Pyrard mentions foot-ball as their sole diversion, adding that "the most universal and the most considerable exercise they have is that of fishing, which is so common an exercise all over the Maldives, that there is no such thing as a particular trade of that nature, for gentlemen and even their Kings pursue fishing as we do hunting in this part of the world. Every man there enjoys the natural liberty of fishing where and for what he pleases."†

Chess.

Chess (from the names of the pieces probably the Indian game) is commonly played by men and boys.‡

Sports.

On fête-days at Málé, sports (M. *kuli jahan)* are exhibited, under rules and restrictions to prevent injury to the performers. To teach the use of the weapons employed, masters (M. *eduru)* are appointed by the Sultan, who always attends these sports and remains till their close. The arena is simply a portion of one of the main streets, with thatched buildings on either side from which the Sultan and ladies of the harem may view the sports. All the male spectators stand round in a ring. The sports consist entirely of mimic hand-to-hand combats between successive sets of performers, two at a time, armed with sword (M. *kaḍi)* and targe (M. *aḍḍana)*, lance (M. *daḍi-haliya)* or quarter-staff *(kuli jaha daḍi).* The players do little more than posture at each other *ad nauseam*, and show but little skill in managing their weapons. The Sultan and by-standers alike appear to evince no real interest in the proceedings, which are conducted from first to last in gravity and silence, and repeated for days together with wearisome monotony.§ It is not considered beneath the dignity of the principal men to take part in these games.

Fire-arms.

As curiously illustrating the absence of progress among the Máldivians, it is worthy of note that the use of fire-arms, which Christopher found just being acquired in 1835, is to this day little understood. The principal men are no less anxious now to be initiated into the mysteries of the "big-guns" (M. *boḍu baḍi),* but will not venture their lives by firing even an ordinary fowling-piece.‖ This timidity seems the more unaccountable considering the fact that the Islanders have had not unfrequently in past years to defend their Atols against the attacks of Malabar enemies, in which cannon and small arms played a part.

Music.

For music they show an undoubted fondness, said to amount among boys to a "prevailing passion." The tambourine (M. *tára)* is common in their houses, whilst tom-toms or drums (M. *beru),* trumpets (M. *tálafili),* and flagiolets (M. *dummárhi)* figure at festivals.

Many songs are current, particularly among the sailors.¶

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* Two and a-half centuries have worked a revolution in this respect. "Quand les femmes vont par la ruë, soit de nuit ou de jour, *bien qu'il soit fort rare qu' elles sortent de jour, elles portent un voile sur la teste.*" —(Pyrard, p. 124.) Even now Máldivian ladies of the upper classes do not walk, but pay their visits in closed palanquins.

† Pyrard, quoted in Harris, Vol. II., p. 711. ‡ Note (8).

§ Mr. Ellis describes a very similar performance by Sakalavas at Antananarivo in 1856, which seemed "grave work with them all." (Madagascar, pp. 399-401.)

‖ On the occasion of a recent visit to Málé (November, 1879) a most miscellaneous assortment of guns, long disused, was produced—from the lengthy Arab gun to an obsolete air gun and revolver of European make. Nor would the owners rest content until each and all had been discharged—with considerable misgiving—by the writer, who was subsequently sorely pressed to fire one of the rusty iron cannon on the ramparts.

¶ Christopher noticed Persian influence apparent in the musical taste of the Islanders.

SOCIAL DISTINCTIONS.

Social distinctions.

The reigning Sultan and Royal family naturally rank highest.

Only closest relations of the Sultan have the right to assume the title of *Mannipul;* whilst descendants of former Sultans, and, from the fourth generation, those of the dynasty in power, have a claim to that of *Didí*, which implies more distinct connection with Royal blood. Ladies of this pure aristocracy are designated *Didí*.

Besides position that springs of birth alone, there are adventitious ranks which accrue either through court favour or the medium of wealth. Such are all State Officers, among which that of *Kilagé-fánu* takes precedence, being confined, formerly at least, to the Regent acting in the absence of the Sultan.*

Many persons of respectable birth receive from the Sultan the titular rank of *Takuru-fánu*. Their wives are styled *Bíbí*, and their lineal descendants *Maniku* (fem. *Manike.)*†

The title of *Kalége-fánu* can be purchased for a few rupees—a small additional payment ensuring the attainment of the higher grade, *Himádi Kalége-fánu*. *Kamuloge-fánu* is the appropriate designation of their wives.‡

The bestowal of all ranks rests with the Sultan, and is notified by public proclamations. Persons thus aggrandized are allotted the rent of certain Islands—the names of which they usually adopt—and live at the Royal charges.

Nobility descends in the female line. "If a noble woman marries a plebeian, she retains her rank, and upon her account the children are reckoned noble; but a woman of the lowest form cannot ennoble herself by marrying a noble man."§

Masters and tindals of vessels frequently assume the appellation of *Nákhudá*, *Névi*, and *Málimi*,‖ as implying skill and experience in seamanship.

Caste.

Caste distinctions are still rigidly adhered to. Pyrard speaks of ten companies commanded by ten of the grandees of the country who serve the King in various civil capacities, as sailors, masons, &c. None but gentlemen could enter the first five, and from the remaining companies toddy-drawers and slaves were excluded.¶ At least seven of such guilds are retained at this day, and there is no lower caste than the toddy-drawer (M. *Rá-veri.)***

Class exclusiveness has lost none of its power. Inferiors always receive those of purer blood or higher rank standing, and remain so in their presence unless invited to be seated. Seats are invariably occupied and vacated according to the rank of those present.†† Common people meeting a noble stand aside in a respectful attitude to allow him to pass. None will eat with those of the lower caste.

The term *Kalo* (fem. *Kamulo)* applies to the common people generally.‡‡

Slaves (M. *Alun*), if not unknown, are no longer sufficiently numerous to be considered a distinct class.

Single Muslim names, *e.g.*, *'Alí*, *Hasan*, *Fatimah*, are most common, though a few, such as *Don Maniku*, bear the impress of Portuguese contact so noticeable in the nomenclature of many Siṇhalese families on the seaboard of Ceylon.

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* Pyrard, *Quilague:* Ibn Bat. (French edition) *Calaky*. Probably of Persian origin.

† Pyrard, *Tacourou*. Col. Yule (Marco Polo, Vol. II., p. 110) notes that that the title *Takfúr* was "applied by the Mahommedans to the Greek emperors of Byzantium and Trebizond.....Redhouse thinks it is a corruption of Τοῦ Κυρίου, but Defrémery says it is Armenian, *Tagavor* 'a king.'" Cf. S. *Tikiri*, තිකිරි; and with *Maniku*, *Manike*, the S. *Meṇika*, මැණිකා. A few persons (*e.g.*, the present Faḍiyáru or Kázi) are by courtesy styled *Maniku-fánu*, as more respectful.

‡ Pyrard, *Calogue*, *Camulogue*. Christopher says that the sum of "1,000 larins [copper *kuḍa lári*], or about Rs. 350, will entitle a man to be called '*Kelege*'; no money can purchase higher." (Trans. Bom. Geo. Soc., 1836-8, p. 314.)

§ Pyrard, in Harris, Vol. II., p. 713.

‖ *Nákhudá* (Hind.); *Málimi*, Ar. *Mu'allim*; *Névi*, cf. S. *neviyá*, නැවියා.

¶ Pyrard, in Harris, Vol. II., p. 713. ** Note (9).

†† Trans. Bom. Geo. Soc., 1836-8, p. 59.

‡‡ Pyrard, *Callo*; *Camulo*. Christopher *(Ibid.)* "'Kalo' is applied to the names of all who have no rank."

THE MALDIVES.

INHABITANTS.

GOVERNMENT.

The form of Government is despotic, but rendered mild by the peaceable nature of the people, and the influence of public opinion.

Sultan.

The supreme ruler is a *Sultan** whose title and rank are hereditary. He resides at Málé, the seat of Government. To the inherent veneration with which superiors are regarded, and the wise provision or happy accident which has made Málé the sole centre of Government and trade for the whole group, may probably be attributed the immense influence exercised by the Sultan over his widely-spread subjects. Rarely, indeed, is his authority disputed even by his own relations.†

The Sultan is the fountain head of justice, but is not above the laws: to him reverts the property of all Government officers at their death:‡ and with him rests the privilege of extending clemency to offenders, though it is seldom used without the advice of his Council.†

Every means is resorted to in order to produce an impression of state and dignity connected with the Sultan's person and authority. All communications with him must be made through his Councillors, and audience is seldom granted even to Europeans. He appears abroad only on public occasions. On Fridays he attends Mosque on foot, accompanied by all the principal officials and escorted by a large body-guard, returning with the same retinue. His dress is suited to his rank, but is noticeable for its want of display both in gaudy colours and profusion of jewellery.

"The customs and etiquette observed in the *durbár* are remarkable for their simplicity. The courtiers and officers take their stations according to their respective ranks. No salutation is expected."§ No one may presume to sit or wear any covering above the waist in the royal presence, except by permission.

The administration of the country is conducted on a basis of constitutional freedom hardly to be expected of a Muslim *régime*, and with a systematic completeness highly creditable to a people so situated. A contented acquiescence of centuries furnishes the best proof of its adaptability to their wants and inclinations.

Two distinct, yet cohesive, branches of Government are recognized. These may be broadly termed the ecclesiastical and judicial and the political and fiscal.

Faḍiyáru.

As "head of the church" and "chief magistrate" the *Faḍiyáru* or Kází‖ receives from all classes alike respect and veneration but little less than is accorded to their Sultan. This reverence for the Faḍiyáru "indicates the sincerity of the Islanders in their belief in the Mahomedan tenets. His decisions, as magistrate, are always received with deference, and the natives in general show that they entertain a high sense of the importance of his duties, particularly that of interpreter of the Koran, he being the only person amongst them who has a competent knowledge of the Arabic, for a purpose considered so necessary."¶

Náibu.

Both "in his sacerdotal capacity" and as "the expounder and administrator of the laws," the Faḍiyáru is aided by *Náibu* and *Katíbu*,** as deputies.

For each Atol he appoints one or two Náibu, who "govern the inferior priests, and are entrusted with the administration of justice and the management of religious concerns" within the limits of their respective Atols. Once a year, or oftener if need be, the Náibu go on circuit through their Atols "for the sake of justice as well as the promoting of religion." At such times they do not fail to "gather their dues and receive presents from an infinity of persons, so that the circuits furnish by this means the best part of their income."††

Katíbu.

On all Islands containing 40 male inhabitants, a Katíbu is stationed with deputed religious and magisterial functions. Marriages are solemnized before him. These Katíbu

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* Note (11).

† Trans. Bom. Geo. Soc., 1836-8, pp. 70, 77.

‡ Note (10).

§ Trans. Bom. Geo. Soc., 1836-8, p. 67.

‖ Christopher writes *Fandiarhee*: Pyrard, *Pandiare*: Ibn Bat., *Fandayarkâloû*. Cf. T. *Páṇḍiyan*.

¶ Trans. Bom. Geo. Soc., 1836-8, p. 70.

** *Katíb*; *Náib*; *Muezzin*—Ar.

†† Pyrard in Harris, Vol. II., p. 712.

are not stipendiary officers of Government, but supported by the Islanders, and are subordinate to their respective Náibu.*

INHABITANTS.

Mudímu.

To every Mosque is attached at least one *Mudímu*,† or minor priest. It is his duty to see that all is decent and in order; to lead the prayers, if required; to proclaim aloud the time for the performance of worship; and to take charge of the tombs of holy men.*

At Málé, the Faḍiyáru is assisted by four Náibu and two Katíbu. These Náibu, according to Christopher, "are usually employed in transcribing passages from the Koran relating chiefly to observances and ceremonies, with an explanation in the Maldivian language, for distribution in the different Attols." Further, as Augurs of the State, they are appealed to to declare auspicious times for momentous undertakings.*

Pyrard says the Faḍiyáru also makes a circuit once a year through the Island of Málé, "condemning all to be whipped that cannot say their creed and prayers in the Arabic tongue and construe them into the Maldivan."‡

Legal procedure.

Justice is dispensed in the house of the Faḍiyáru or Náibu, "and sometimes, in cases of moment, in the King's Palace."‡

"The mode of trial is equally summary and simple. On a complaint being made, the defendant is cited to appear before the Fandiarhee or his deputy" by the *Dévání*,§ or process servers (six in number), acting by virtue of a special letter from the Náibu. An accused person can even be at once arrested in the commission or upon strong suspicion of a criminal or illegal act. "If he lives out of the Naybe's jurisdiction, he is summoned by letters from the Pandiare, which enjoin him to come from any part of the realm to the Island of Malé. The Pandiare's writ is served publicly upon the defendant by the Catibe or the superior of the Island, and if he does not appear at the place appointed, he is not only excommunicated and excluded from eating and drinking with his neighbours or coming to church, but seized by a party of soldiers." "The testimony of one witness in support of an accusation is held sufficient to establish its truth." When the complainant can produce no witness, the accused, to clear himself, must make oath as to his innocence; should he decline this test, he is adjudged to be guilty. If appearances or probability be in favour of the truth of the complaint, the accused will not necessarily escape punishment by taking the oath.‖

"Indictments, depositions, or sentences are never put in writing, being all very short; nay, in civil matters, the allegations are never written, unless it be in a suit for land of inheritance, or cocoa trees, which are reckoned immoveable; then indeed the judges give letters sealed with ink (wax they do not use) for an evidence of the person's right, to be transmitted to posterity. If either plaintiff or defendant suspects the partiality of the Naybe, they have recourse to the King, who orders the cause to be tried before impartial judges."‖

Sentences are executed by the Dévání, who, for their general services, receive a small monthly allowance of rice, and one-twelfth share of all awards and proceeds of sale.

Máldive law.

The Máldivians have a written as well as an unwritten law, the former being based on the Muhammadan code, whilst the latter is founded in the established and well-known customs of the country.‖

Penalties.

The penalties inflicted at this day bear a marked favourable contrast with those in force a few centuries back. Mutilation in case of theft has long given place to scourging—the ordinary punishment in all offences short of murder. Murderers are dealt with at Málé, whence they are banished, after being publicly disgraced and flogged, to some distant and sometimes uninhabited island.

A curious custom, still surviving, permits an insolvent debtor to work off his debt as his creditor's servant. "If he thinks himself ill used, he may turn himself over to another master, provided he lays down the money due to the former." These bondmen are called *Femuséri*.¶

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* Trans. Bom. Geo. Soc., 1836-8, pp. 70, 71. † *Katíb; Náib; Muezzin*—Ar.

‡ Pyrard, in Harris, Vol. I., p. 712. § Pyrard, *Deuanits*. Cf. Pers. *Divanbeki* 'judges.'

‖ Trans. Bom. Geo. Soc., 1836-8, p. 77; and Pyrard, in Harris, Vol. I., p. 712-3.

¶ Pyrard, *Pemousseré*. See Gray, J. R. A. S., Vol. X., N. S., 1878, pp. 204-5; and *Voyages d' Ibn But. IV.*, 124.

THE MALDIVES.

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Christopher mentions that severe regulations exist regarding the respect due to married women, and gives some details of the penalty exacted in cases of adultery.*

Viziers.

The management of all State and revenue matters is entrusted by the Sultan, subject to his approval, to Viziers (M. *Vazíru)* or Councillors (formerly called *Muskuli.)*† "He very frequently consults with them—a custom which tends much to cherish a reciprocal confidence. Although the Viziers have the privilege of offering advice, they possess no authority to control the Sultan, but the influence they acquire from their situations often enables them indirectly to restrain him from arbitrary exertions of power, or from adopting measures injurious to the public interests, by exciting the people to remonstrate in a body."‡

Until comparatively recently this branch of the administration was vested in the hands of six Viziers, a Treasurer, and a Harbour-Master, whose titles and duties had remained substantially the same for centuries past.

The six Viziers were styled respectively :—

1st—*Dorhiméná.*	4th—*Fámudéri.*
2nd—*Hakurá.*	5th—*Máfaï.*
3rd—*Velánú.*	6th—*Dáharú.*

Of their functions and status (*circa* 1835) Christopher writes :—"The Viziers are executive magistrates in the different quarters of the town where they respectively reside, exercising authority also over all the soldiers belonging to their respective quarters. When an offender has been found guilty by the Fandiarhee, it is the duty of the Vizier to whose quarter he belongs to see the sentence enforced. The Viziers superintend public works and undertakings, such as building up the wall that protects the boats from the swell, and, in fact, the execution of all orders issued by the Sultan. They are appointed by the Sultan, and are removable at pleasure. On their installation they receive from the Sultan a staff of office, which they carry when attending on his person, on public occasions, and in his processions to the Mosque, &c. The nomination is proclaimed in all the streets of Málé by the public crier, who blows a trumpet to attract attention. We were informed that an oath of allegiance was administered to them and other public officers."‡

Christopher found that, with the exception of the Dorhiméná and Velánú Viziers, who had the respective supervision of military and naval matters, the rest had apparently no particular duties allotted them.

As each incumbent of the first five Vizierships died, no successor appears to have been appointed, and the titles thus gradually became extinct. That of the sixth Vizier alone survives in the person of the son of the former Dáharú.§

At the present day the Sultan has only three Chief Ministers, viz. :—

1. The *Hadégiri.*
2. The *Dáharú.*
3. The *Míru Baharu.*

Hadégiri.

1. The *Hadégiri* or *Boḍu Baḍéri*‖ is, as his name implies, Chief Treasurer of the realm. He seems to rank above the other two Ministers and to possess greater influence in the community. A staff of accountants and clerks are employed to assist him in the revenue duties at Málé.

"The Hindeggeree is vested with authority to enforce the payment of revenue when a complaint is made to him by the Attol-wari."¶ In case of default in the transmission

* See Trans. Bom. Geo. Soc., 1836–8, pp. 77–8.

† Christopher, *Muskull* 'elder'; Pyrard, *Mouscoulita, Mouscouly auare.* Cf. S. *Ṇpá* (Mahávaṇso.)

‡ Trans. Bom. Geo. Soc., 1836–8, pp. 69, 71. § Note (12).

‖ Christopher, *Hindaggeree*; Pyrard, *Endequery.* Ibn Bat. calls the *Hendidjéry*, 'Preacher,' assigning the duties of Chief of the Treasury and Receiver General of Revenue respectively to the *Fámeldâry* and *Máfâcaloû* Viziers. Cf. S. *Bhánḍágáriká* (Mah. *Bhánḍágáriko Amachcho* 'Lord High Treasurer.')

¶ Trans. Bom. Geo. Soc., 1836–8, p. 71.

of the established dues, when no explanation is tendered, the Atoḷu-veri is held personally responsible, and called to account for his remissness.

INHABITANTS.

Dáharà.

2. The *Dáharà* has no specific department of public business to supervise. But for a certain voice in the military and municipal affairs, his office would be a titular sinecure.

Míru Baharu.

3. The *Míru Baharu* (in the Arabic form *Emir-el-Bahr*)* is the Port Doctor and Master Attendant of Málé. He visits all vessels that arrive and refuses permission to land until it has been ascertained to his satisfaction that there is no sickness on board. It lies with him at discretion to put in force the strictest quarantine.

Generally speaking, the entire management and control of all public business not falling within the province of the Hadégiri, and distributed a few years back among the six Viziers, devolve now on the Míru Baharu and the Dáharà.

Atoḷu-veri.

For the collection of the revenue from the different Atols one or two agents, called *Atoḷu-veri* or *Váru-veri*,† are appointed by the Sultan on the recommendation of the Hadégiri.

They do not necessarily live in the respective Atols assigned to them. The majority remain at Málé and employ sub-agents. Each Atol has a storehouse (M. *váru-gé*), where the Government revenue is temporarily warehoused until required to be transmitted to Málé. The emoluments of this office must be considerable, as it is held by relations of the Sultan and Chief Ministers, and frequently by the Ministers themselves. Its tenure lasts for life, or during the Sultan's pleasure, and at the decease of an Atoḷu-veri his estate is held liable for any balance due, or alleged to be due, for his division.

Rarhu-veri.

In respect to the collection of the revenues, each island has its own headman, *Rarhu-veri* or *Veri-míha*, generally a Katíbu, who stands in the same relation to the Atoḷu-veri as the latter does to the Hadégiri.‡

The revenue of the different Atols (usually paid in native produce and manufacture) is collected into the Treasury (M. *boḍu baḍéri-gé*) at Málé, whence it is shipped in the Sultan's and private vessels on Government account to different ports of India and Ceylon.

REVENUE.

Revenue.

It is impossible to form any estimate of the total revenue received annually by the Government at Málé. On no subject are the Islanders more chary of affording information. It cannot, however, be inconsiderable. "As for the King's revenue," says Pyrard, "he has many islands which are Crown lands, besides a fifth part of all the grain and fruits of the country, and a tax on dried fish, shells called *bolly* [*boli*, cowries], and cords of cocoas, which he lays upon them according to their circumstances; for he has no taxes paid him in money, abating what is paid as a purchase for titles and offices, or for licenses to wear fine apparel. He obliges his people to make him every year as much cotton cloth as clothes his soldiers, for he gives them clothes as well as pay."§ Each Atol is bound to pay yearly a certain portion of its produce, said to be levied as a poll-tax upon every male and female over twelve years of age, at the following rates:—1 *koṭṭa* of cowries, 12 cadjans (M. *faṇ*), and 1 *tula* (28 lbs.) of coir for every woman and girl; and for each man and boy the same, with the addition of 50 dried fish, 100 cocoanuts, and 50 *adubá* of jaggery. A payment of cloth and mats is also exacted from Atols where it is manufactured. Native money is now occasionally accepted in lieu of produce.

Besides a claim to all wrecks, the Sultan further asserts a right of pre-emption at low rates on all cargoes imported from foreign ports.

The burden of taxation must be light, as it appears never to be demurred to. The people at Málé pay no taxes.

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* In Pyrard's day there were two "*Mir vaires*" subordinate to the "*Velannas*."

† Christopher, *Attol-wari*; Pyrard, *Varuery*. ‡ Christopher, *Rarhu-wari*.

§ Pyrard, in Harris, Vol. I., p. 714.

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INHABITANTS.

Military force.

MILITARY FORCE.

There can never have been a warlike spirit prevalent among a race so peaceful by nature. "They make no war," says Ibn Batúta, "and their weapons are prayers."* Long periods of peace, broken very rarely by rumours of war or actual conflict with enemies other than roving Indian pirates, added to their constitutional timidity, has reduced the military efficiency of the Máldivians to a mere shadow.

The sole military force consists of a non-descript militia *(Hagu-bé-kalun)*† at Málé, divided into six companies numbering nominally 100 men each, but with an actual strength at the present day of probably not less than 1,200 all told. These companies were formerly under the command of the six Viziers as Captains *(Bodu-bé-kalun.)*

"The soldiers bear no arms, and are under no sort of discipline beyond that which results from the habit of assembling, without much order or arrangement, when called together." Their duties, according to Christopher, are so anomalous that they often serve as sailors on board the public boats.‡

A body of 40 men *(Kudi-bé-kalun)*§ is required to mount guard in rotation at the Sultan's palace, and is in charge of an officer called *Má Baḍéri Takurú-fánu.* These men have certain privileges, and are distinguished from the Hagubé-kalun by their head-kerchief.

A small body guard *(Degedetère-bé-kalun)* bearing muskets, escorts the Sultan when ever he appears in public.

The Government sailors *(Kalási-kalun)*‖ number from 200 to 300, and are separately commanded by eight officers.

Soldiers and sailors alike receive a fortnightly allowance of 12 measures *(náli)* of rice per man, and once a year additional pay in cloth and money.

LANGUAGE.

Language.

Little light has been thrown hitherto on the Máldive language. The grammar has still to be written; whilst the only vocabularies extant—those of Pyrard (1602-7)¶ and Christopher (1836-8)**—are very incomplete.

The language spoken by these Islanders is substantially the same throughout the group—including Maliku (Minakaï)—though dialectal variations of the Málé standard occur at Minakaï, and particularly in the Southern Atols, which have been less affected by foreign intercourse.

It can easily be understood that at Málé—the emporium of trade for the whole group—the language must have incorporated into itself many foreign words and lost much of its original purity. "There are other languages," says Pyrard, "such as those of Cambaye, Guzerati, of Malalaca, and the Portuguese, which some learn for the sake of trade, and by reason of the communication they have with those peoples."†† The modern vernacular has in this way become specially interlarded with Hindústání phrases.

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* Lee's Travels of Ibn Batúta, 1829, p. 176.

† Herft (Ceylon Miscellany, Vol. I., 1855, p. 128), *Hangoobacolom;* Christopher, *Hanggube;* Pyrard, *Engou.* Mr. Gray compares S. *anga*, ङ्ग, in *chaturanga*, 'army.'

‡ Trans. Bom. Geo. Soc., 1836-8, p. 72. § Herft, *Hodobicaloom;* Christopher, *Kudibe.*

‖ Pyrard, *Callasir.* Hind., *Khalási.*

¶ *Dictionaire de quelques mots de la Langue des Maldiues interpretez en François,* Supplement to *Voyage de F. Pyrard,* Paris, 1619.

** "Vocabulary of the Maldivian language."—J. R. A. S., Vol. VI., o. s., pp. 42-76.

†† Gray, J. R. A. S., Vol. X., N. S., 1878, pp. 181-2. The Portuguese language especially ruled in correspondence between European and natives in India and Ceylon during the 17th and early part of the 18th centuries. The Danish Missionaries to Malabar, writing in 1709, speak of its "going almost through all parts of the East." (Account of Danish Mission to Malabar, Part II., p. 14, London, 1718). The majority of Rája Siṅha's letters to the Dutch (between 1635-40 *circa*) were written in Portuguese, and there are extant at least three letters from the Máldive Sultan, Ibráhím Iskandar, in the same language. *V. s.*, p. 31.

INHABITANTS.

Recently Mr. Gray has done something towards showing the connection between the Máldive and Siṇhalese languages by a partial comparison of vocabularies.* It is likely that further investigation will establish the position that the Máldivian should be classed among the A'ryan group of languages, by proving it very closely allied to Siṇhalese (under its older form of Eḷu)† both in grammatical structure and phonetic character.

In the Southern Atols the dialect approaches Siṇhalese most nearly.‡

Since the Muhammadan supremacy, *Arabic* has been the language of religion on the Islands, but not generally that of foreign official correspondence until within the last half century.§

Besides the Arabic (old and new style), the characters found on tombstones and Mosque tanks are of two kinds, generally carved in intaglio.

Dives akuru.

A knowledge of the oldest called *Divehi akuru* or *Dives akuru*, 'the letters of the Island (kingdom)'—probably used by the original settlers—is confined at the present day to the Faḍiyáru and a few others at Málé, though it is more widespread in the Southern Atols. Orders to these Atols are not now, as they seem to have been in Christopher's time, made out in this old character. It is written from left to right and is syllabic. The letters bear some resemblance to old Siṇhalese, as Mr. Gray has shown, but would seem rather to be modifications of the old Vaṭṭeḷuttu character once used throughout the South Tamiḷ and Malayáḷam districts of India.‖

In the *Dives akuru* alphabet (which has never been published in full) there are twenty-five letters (not counting duplicates) capable of some hundreds of vowel mutations.

Gabuli tána.

The modern character, called *Gabuli-tána*,¶ is that usually employed. It is said to have been introduced when the Máldivians recovered their independence after the temporary subjection to the Portuguese, and has certainly been in use for more than two and a-half centuries.

The alphabet contains eighteen letters peculiar to itself, besides a few derived from Arabic and Persian, and is written from right to left, as opposed to the *Dives akuru*. "It will be difficult," says Mr. Gray, "to find another instance of so radical a change." The first nine letters are merely the Arabic numerals from 1 to 9: the last nine probably simplifications of the corresponding letters in the old alphabet. Vowels are not inherent, but are supplied by diacritical strokes common to the Arabic. Unlike the *Dives akuru*, these letters do not admit of being joined in writing. "It is customary to intersperse sentences with salutations, &c., in the Arabic character."**

There are varieties of *tána* writing, such as the *Harha tána* and *Defo' tána*, but these are awkward and rarely employed.

Much confusion in the sound of letters and difficulty in determining the correct orthography of words arises from the absence of any acknowledged written standard, and the consequent vagaries of each writer.

With the exception of short expositions of the Kurán, called *tartib*,†† in lithographed manuscript, and treaties on navigation and astrology—the property of ship captains—no

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* "The Maldive Islands: with a vocabulary taken from François Pyrard de Laval, 1602-1607," J. R. A. S., Vol. X., N.S., Art. VII., 1878. See, too, "Contributions to Siṇhalese Grammar," by Dr. E. Müller (Ceylon Sessional Papers, 1880). Prof. E. Kuhn contributed in 1879 an article bearing on the subject to the *Munich Sitzungsberichte der Philos-Philol. Hist. Classe der K. Akademie der Wissenchaften*, Vol. II., Pt. III., pp. 399-434, of which Mr. D. Ferguson is preparing a translation for the Indian Antiquary.

† Note (13).

‡ See Ceylon A. S. Journ., Vol. VII., Part II., No. 24, 1881, pp. 119-24. "In the Atoll of *Souadou* and towards the south they speak a language hard to understand, rough and barbarous, but still it is the common (Maldive) language." (Gray, *loc. cit*, quoting Pyrard.)

§ With rare exceptions the whole series of the annual letters from the Sultans to the Dutch Governors in Ceylon during the 18th century was written in the Máldive language and modern character *(gabuli tána)*, and the practice continued until *circa* 1830, since which time Arabic has been regularly employed.

‖ First pointed out by Dr. A. C. Burnell in the Ind. Ant., Vol. I., 1872, p. 229.

¶ *Gabuli* 'accepted;' cf. Ar. *kabúl*: *tána*; cf. Jav. *tanu* 'writing.'

** J. R. A. S., Vol. VI., O.S., 1836, p. 43.

†† Note (14).

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other books exist. Not a few songs and charms are committed to writing for private use on loose leaflets of paper, which has to a great extent superseded the use of *pandanus* (M. *Má-karhikeyo)* leaves.

Notes.

NOTES.

(1)

Population.

POPULATION.—Lieutenant Christopher, in 1836, (J. R. A. S., Vol. VI., o.s., p. 43) "estimated that there were full 20,000 persons on those Islands," but added, "their numbers are evidently diminishing rapidly, although very few, if any, of the people are known to reside permanently in a foreign land." As far as concerns the alleged progressive diminution of population, this statement would appear to be refuted by the following comparative table (unfortunately, not quite complete) of the number of inhabited Islands throughout the group, shown in the Admiralty Charts corrected up to 1866 (Gray, J. R. A. S., Vol. X., N.S., 1878, p. 197), as tested very recently by a close personal examination of Islanders from different Atols :—

Atols.	1836 (Admiralty Charts.)	1882.
Tiladummatí	24	?
Miladummaḍulu ...	32	?
Fádiffoḷu	2	4
Máḷosmaḍulu... ...	30	? 32
Málo	8	13
Ari	13	18
Feḷidu	5	5
Mulaku	8	10
Nilandu	13	14
Koḷumaḍulu	11	13
Haddummatí	12	13
Suvádiva (Huvadú) ...	17	21
Aḍḍú...	7	7
	182	

It is said that a census of the Islands was last taken during the reign of S. M'uín-ud-dín, but no particulars are forthcoming.

(2)

There would seem to be but slight traces of Malayan influence on the Máldive group.

Among prevalent superstitious ceremonies, the Máldive custom of launching a small bark loaded with perfumes and flowers, and turning it adrift at the mercy of wind and waves as an offering to the Spirit of the Winds, Dr. Leyden* compares to the very similar offering to the god of evil made by the Biajús, a race of Malay sea gypsies in the Indian Archipelago.

Prinsep (Journ. Bengal A. S., Vol. V., 1836, p. 793) considered the Máldive orthography of Arabic to partake of "the Malay style ;" and a small proportion of Malayan words, though of little importance, is undoubtedly to be found in the language of these Islanders, amounting only to 1·9 (Yule) per cent. in the Máldive vocabulary (275 words) given by Pyrard. This admixture may be casual, and have been brought about, as Crawfurd points out in the case of Malagasy, by chance visits of "those strong fleets of rovers that, in all known time, have ranged the seas of the [Malayan] Archipelago. I suppose them, while either in quest of booty or adventure, to be driven into the South-Eastern monsoon or trade wind by a tempest. Unable to regain the shores of the Archipelago, they would from necessity, and after some struggle, put before the wind and make for the first land. * * * * They would settle, amalgamate with the inhabitants, and convey some instruction to them along with a portion of their languages."†

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* "On the Language and Literature of the Indo-Chinese Nations." Mr. Gray (J. R. A. S., Vol. X., N.S., p. 203), quotes Surgeon-Major Davie, 'Medical History of the Laroot Field Force.'

† Crawfurd, "Dictionary of the E. Indian Islands," 1856, p. 282.

Two Malayan invasions of Ceylon are recorded during the reign of Paṇḍita Parákrama Báhu III., *(circa* A.D. 1267), and to this day the west face of the Fádiffolu Atól is known to the Máldivians as "*Java kara*"—*i. e.*, 'the Malay Coast'—although the islands on that edge have for centuries remained uninhabited.

(3)

Date of Muhammadan Conversion.

DATE OF THE MUHAMMADAN CONVERSION.—In his paper on the Máldives (J. R. A. S., Vol. X., N.S., 1878, Art. VIII., p. 177,) Mr. Gray notes: "Ibn Batuta, while residing at the Maldives, married, about 1340 A.D., the daughter of a Vizier who was grandson of the Sultan Daoud, who was the grandson of Chenourāzah, the first king who embraced the Muhammadan faith. (Ibn Bat., Paris, 1858, Vol. IV., p. 154.) The probable date of the conversion is, therefore, 1200 A.D. Ibn Batuta saw the record engraven in wood in the chief mosque."

If restricted to the first *Royal* convert on the group, the approximate date here assumed can hardly be gainsaid. "They have a tradition," writes Christopher, "that about 400 years ago [A.D. 1435 *circa*], the Muhammadan religion was introduced among them by a man whose name was Tabriz, or whose country was so called. The probability is that the latter was the case. * * * Tabriz, they say, came from Persia; and they state that shortly after his death some of his countrymen, who came in search of him, remained, and, when they died, were buried on the S. E. point of the Island."*

Further confirmation would be afforded were it possible to identify the famous Muhammadan saint of the biographies Shaikh Jalál-ud-dín Tabrízí who died in A.H. 642 or A.D. 1244 and was buried according to the A'ín-i-Akbarí at "Bandar Díú Mahall" (held by some authorities to be the Máldives) with "Tabriz," as known to the Máldivians under the name of Yúsuf Shams-ud-dín, or even with one of his companions.†

Crawfurd properly remarks, however, in commenting on the introduction of Muhammadanism among the islanders of the Malay Archipelago, that "the dates and times quoted for the conversion of the different people refer to that of their rulers, and not of the people generally; many converts had in every case been made long before the periods quoted, and many had still to be made."‡

It was probably so at the Máldives. The wave of Muslim proselytism might not reach Málé for more than a century—the spiritual conquest of the group dating from the conversion of the sovereign at Málé, *circa* A.D. 1200,§ though the Southern Islanders may well have repelled the faith for some time longer.

As in the Eastern Archipelago, the progress of conversion would be likely to be gradual. "The missionaries who effected the conversion were not, for the most part, genuine Arabs, but the mixed descendants of Arab and Persian traders from the Persian and Arabian gulfs—parties who, by their intimate acquaintance with the manners and languages of the Islanders, were far more effectual instruments. In the course of several ages Arabian and Persian merchants and Mahomedan merchants from Gujrat and other ports of India had settled in various parts of the Archipelago. Unaccompanied by their families, they intermarried with the native inhabitants, and from this union sprang the apostles of Islam."‡

So Pyrard:—"They received Mahometanism through the Moors and Arabs who, while trading over all the Continents and islands of India, brought also their law, which has since remained in most of those parts."‖

(4)

Legend of the Muslim Conversion.

LEGEND OF THE MUSLIM CONVERSION.—The story of the Muhammadan conversion, given by Ibn Batúta, runs as follows:—

"When the people of the islands were idolators, there appeared to them every month an evil spirit, who came from the sea, resembling a ship filled with lamps. It was the custom of the natives, when they beheld him, to adorn a young virgin and to conduct her to a *boudkhânah*, or temple of idols, built on the shore, and having a window by which she could be seen. They left her for the night, and when they returned in the morning they found her violated and dead. So

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* Trans. Bombay Geo. Soc., 1836-8, p. 74.

† Journ. Bengal A. S., Vol. XLII., Pt. I., 1873, p. 260.

‡ Crawfurd, "Dictionary of the E. Indian Islands," p. 236-7.

§ Sir W. Robinson puts the date of conversion of the Lakkadive Islanders A.D. 1250 *circa*.

‖ Gray, J. R. A. S., Vol. X., N.S., p. 177.

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every month they cast lots, and he on whom the lot fell gave up his daughter. In course of time arrived a Maghrébin, named Abou'l Berecât, the Berber, who knew by heart the glorious Korān. He lodged in the house of an old woman at Mahal. One day he found her family assembled, and the women weeping as at a funeral. He asked but could not be made to understand the cause, until an interpreter came, who told him that the lot had fallen upon the old woman, and that she had one only daughter. Abou'l Berecât then said to the old woman, 'I will go to-night in thy daughter's stead': he was then entirely beardless. So, at night, after his ablutions, he was led to the idol temple. There he set himself to recite the Korān, and in a while beheld the demon. He continued his recitation, and the demon, as soon as he came within hearing of the Korān, plunged into the sea. So, when it was dawn, the people, who came as was their custom to remove and burn the corpse, found the Maghrébin still reciting the Korān. He was conducted to the King named Chenourāzah, who was astonished to hear what had happened. The Maghrébin then proposed to him to embrace the true faith, and pressed him to receive it. But Chenourāzah said: 'Stay with us till next month: and if you do again as you have now done, and escape the evil genie, I will be converted.' The stranger remained, and God disposed the heart of the King to receive the true faith. He became Mussulman before the end of the month, with his wives, children, and court. At the beginning of the following month the Maghrébin was conducted to the idol temple; but the demon came not, and he recited the Korān till the morning, when the Sultan and his subjects arrived, and found him so employed. They then broke the idols and razed the temple to the ground. The people of the island embraced the faith, and sent messengers who converted the other islanders also. The Maghrébin remained among them and enjoyed their high esteem, and it was the doctrine of his sect, viz., that of the Imām Mālik, which the natives professed. Even at present they respect the Maghrébines for his sake. He built a mosque which is known by his name. I have read the following inscription graven in wood on the enclosed pulpit of the grand mosque: '*The Sultan Ahmed Chenourāzah has received the true faith at the hands of Abou'l Berecât, the Berber, the Maghrébin.*'"*

Vestiges of this romantic legend have been handed down by tradition current among the Islanders to this day. But with more probability they assign to *Yúsuf Shams-ud-dín*, of *Tabrīz*, the honour which Ibn Batúta not unnaturally would claim for a Maghrébin, and the votaries of Hazrat Mírá Sáhib for the later Nágúr saint (A.D. 1504-1570.)†

"Throughout the world," observes Mr. Conway, "are found legends of beautiful virgins sacrificed to demons or deities." That connected with the *Bahirāva-kanda*—a hill overlooking Kandy—bears a close resemblance to the Máldive tradition,‡ and Mr. Conway quotes a somewhat similar legend current in Japan concerning the fiend Shuden-dozi.§

(5)

Sunní Sect.

SUNNI' SECT.—Muhammadans in general are divided into two great sects.

1.—The *Sunnis*, or Traditionists; so called because they acknowledge the authority of the *Sunna*, or collection of moral traditions of the sayings and actions of their Prophet, as concurrent with and supplementary to the Kurán. The Sunna directs the observance of several things omitted in the Kurán, and in name as well as design answers to the Mishna of the Jews.

The Sunnís are sub-divided into four chief sects (which derive their names from their respective founders), viz., *Hanífis*, *Shafa'ías*, *Málikis*, and *Hambalis*. These sects, though all are considered sound in fundamentals, differ in some points of law and religion, and follow the interpretation of the Kurán and the traditions of the four great doctors Abú Hanífa, Málik, Al Shafa'í, and Ibn Hambal.

The Arabians and Muslims of Southern India, Ceylon, and the Lakkadive and Máldive Islands generally, follow the teachings of Al Shafa'í.

2.—The *Shía'hs*, or partisans of the house of 'Alí, adhere to their own traditions, and reject the authority of the Sunna. According to the Shía'h doctrine the sovereign *Imámat*, or temporal and spiritual headship over the faithful, was by divine right vested in 'Alí and in his descendants through Hasan and Hussain, the children of Fátimah, the daughter of the Prophet; and thus the Persian Shía'hs add to the formula of belief the confession, "Alí is the Kaliph of God."

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* Gray (J. R. A. S., Vol. X., N. S., pp. 180-1), quoting Ibn Bat., French edition, Tome IV.

† Ceylon A. S. Journ., Vol. VII., Pt. II., No. 24, 1881, pp. 135-136.

‡ Ceylon A. S. Journ., 1865-6, pp. 30-1.

§ "Demonology and Devil-lore," Vol. II. pp., 405-8.

Between these two sects (*Sunnis* and *Shia'hs*) exists the most inveterate enmity. Though the difference arose at first on a political occasion, it has notwithstanding been so well improved by additional circumstances and the spirit of contradiction, that each party anathematizes the other as abominable heretics and further from the truth than either the Christians or the Jews.*

(6)

Superstitions.

SUPERSTITIONS.—"Where the mass of the people is sunk in ignorance, as is the case here with only a few exceptions, it is not surprising to find the most absurd and superstitious fancies exerting a powerful and pernicious influence. In describing their superstitions, it may not be irrelevant to premise that, in the absence of other and better sources of information, an account of these may throw some light on the nature of the religion of the islanders which preceded the one which they now profess.

"One of the most remarkable of their customs is the offering made to the sea when a boat is to be launched [M. *salavátu*]. On such occasions a small vessel, three or four feet long, being decked out with flags, and having samples of the various fruits of the island, is set adrift; should it be a boat newly built, other ceremonies are observed, accompanied with feasting, music, &c. The miniature vessel is decorated with flowers, and her gunwales are hung with fruits, for which, as soon as she enters the water, there is a general scramble."†

"When they set out upon a voyage they avoid touching or meeting any body, for if any unlucky accident befalls them, they impute it to the person that touched them. When they go a-fishing they must not salute any, or bid them good-morrow; from sunset on Thursday till three or four o'clock next morning they suffer nothing to be carried out of their house, but receive all that is brought in."‡

"Before a voyage is undertaken an offering is made to some saint for success, and in danger or distress the mariners trust chiefly in the efficacy of vows or offerings to the tomb of some personage (dead or living) of eminent piety. We are informed of large sums given as votive offerings, made during boisterous weather, to an old priest resident at Calcutta. All moneys paid at Malé in fulfilment of such vows go to the priest.§ It is also a common practice for persons labouring under sickness, or any other sufferings, to dedicate certain sums as means of ensuring relief. An amulet obtained from a reputed saint is prized very highly as a preventive of calamity, and those who possess such a thing constantly wear it."†

Mr. Gray has translated some remarks of Pyrard regarding other superstitious practices of these Islanders:—"'*Siare* [M. *Ziyára*]; a spot dedicated to the *King of the Winds* in a secluded corner of each island, where those who have escaped from danger (at sea), come to make offering daily of little boats and ships fashioned on purpose, and filled with perfumes, guns, flowers, and odoriferous woods. They set the perfumes on fire, and cast into the sea the little boats, which float till they are burned; and this, say they, in order that the *King of the Winds* may accept them.' We have here the remains of pre-Buddhistic worship of the elements, which grew into a propitiation of the god or devil at whose hands they feared harm. This worship seems to have survived Buddhism, and to have lived with Islam, just as the Dewale-worship lived with Buddhism in Ceylon, or as the mysterious grove-worship existed along with Hebrew monotheism." Again: "'Also when they find difficulty in launching their ships and galleys, they kill some cocks and hens, and throw them into the sea in front of the ship or boat.' A cock is a favourite offering to the Ceylon devils."‖

"They likewise pay a superstitious deference to the imaginary *King of the Sea*, and dare not spit to the windward of the ship, nor look behind them."‡

"'They believe that evil is caused by the devil troubling them, and that he is the sole author of death and sickness. They invoke him accordingly, offering flowers and preparing a banquet of all sorts of meats and drinks, which they place in a secret spot and leave to be wasted, unless perchance some of the poor come and take them. With the same design, they kill some cocks and hens, turning towards the sepulchre of Mahomet, and then and there lay them down and leave them, praying the devils to accept the offerings and to take himself off and leave the patient at ease. This sorcery they call *cauery*' (Sans. *kawi* 'incantation.')"‖

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* See Sale, 'Koran'; Stobbart, 'Islam'; and, for a forcible skit on the "differences" between the Sunnis and Shia'hs, Moore, 'Two-penny Post-bag' (Abdallah to Mohassan). † Trans. Bom. Geo. Soc., 1836-8, p. 75.

‡ Pyrard, quoted in Harris, Vol. I., pp. 710-11. M. Garcin de Tassy has shown that the god of the sea reverenced by the Maldive Islanders is identical with the mysterious saint *Khdja Khizr*, in whose honour, as the discoverer of the water of life and patron of the waters, the festival of the *Bira* is held during the month of Bhádún, (August—September).—Sell., 'Faith of Islam,' pp. 266-1; and see Mandelso, 'Travels,' 1637, p. 836.

§ Cf. Ceylon A. S. Journ., Vol. VII., Pt. II., No. 24, 1881, p. 126. ‖ J. R. A. S., Vol. X., N.S., 1878, pp. 202-3.

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Buddhism on the Máldives.

(7)

BUDDHISM ON THE MÁLDIVES.—Mr. Christopher (Trans. Bom. Geo. Soc., 1836-8, pp. 313-4) adduces the following evidence in favour of the pre-existence of the Buddhist cult on the Máldive group :—

(i.) The posture employed in burial alleged to be similar to that of the recumbent Buddha, viz., the body laid in the coffin on its right side, the right ear resting on the right hand, and the left arm placed along the thigh.

(ii.) The assertion of a Buddhist priest, "considered a clever man, and well read in Singalese books," that there were formerly on the Máldives "two noted temples of Buddh."

(iii.) The *Bó* tree *(Ficus religiosa)* said to be "still suffered to stand alone in the vicinity of mosques, when all other shrubbery is cleared away for the burial ground."

(iv.) "The dread the Maldivians manifest of taking animal life."

The points raised will be found to be materially weakened on examination :—

(i.) Christopher here evidently follows Pyrard (p. 117) whose exact words are * * * "luy mettant la main droitte sur l'oreille, et la gauche tout au long de la cuisse, et le posent * * * couché sur le costé droict *iusques à ce que le corps soit porté en terre;*" but further on (p. 119) "Quand ils mettent le corps dedans [la fosse], ils luy tournent la face vers le costé du sepulchre de Mahomet," &c.—in fact the usual Muslim burial with the important exception of the *position of the arms.* Can Pyrard have been mistaken? In Ceylon Muhammadan burials the body is inclined on the right side with the face looking towards Medina, the head slightly raised and supported on sand, and the arms placidly folded in front. This is said to be also the practice now in vogue at the Máldives.

(ii.) In the absence of corroborative testimony, the accuracy of this nameless priest's statement may fairly be impugned. It is quite possible that he may have identified the Máldives *(Mála-diva)* with *Puvangu-divayina,* or some other undetermined island quoted in the *Vihára-asna,* a list of Ceylon Buddhist shrines; indeed, it is very probable, for, adds Christopher, "he named the islands on which they were situated, but I could not recognize them as perpetuated to the present day." The religious and historical books of the Siphalese yet discovered are altogether silent regarding any Buddhist mission to the Máldives, or the existence of Buddhist temples on the Islands.

(iii.) Only two *Bó* trees [M. *Bói gas*] are known to be growing at the present day on the group—one upon the uninhabited island of *Kederá* in Suvádiva (Huvadú) Atol, and the other at *Málé,* near the palace, but not within the walled enclosure or burial ground of any mosque. Pyrard says nothing to support the belief that the Máldivians held the *Pipul* in greater regard than other trees, and they do not in any way respect it now.

(iv.) Christopher again follows Pyrard (p. 129): "Ie prenois plaisir à voir que pour l'ordinaire pour tuer vne poule, il falloit courir par toute vne isle pour trouuer vn homme qui sceust tuer, encore pourueu qu' il le voulust faire : dautant qu' ils reculent tant qu' ils peuuent à faire ce mestier-là." This reluctance to turn butchers, instead of a survival of Buddhistic orthodoxy, may perhaps as reasonably be attributed to the superstitious requirements enjoined on the select few qualified to kill animals. "Quand il faut tuer quelque animal pour leur viure, il y a bien du mystere. Ils leur coupent la gorge en se tournans du costé du sepulchre de Mahomet, et disent leurs prieres, et tout aussitost ils les quittent, ou ils les iettent sans y toucher iusques à ce qu' ils soient morts entierement. Que si quelqu' vn y touchoit auparauant, ils letteroient cette chair, et ils n'en mangeroient point. Ce n' est pas tout, il faut que ce ne soit que par vn certain endroit seulement qu' on leur coupe la gorge, autrement personne n'en mangeroit. De plus, tout le monde ne s' entend pas à cela ; ce sont principalement des Prestres ou des Moudins qui le sçauent ; ou bien ceux qui l'entreprennent doiuent estre anciens et non pas iennes, et il faut qu' ils ayent eu des enfans."

In this connection should not be omitted Mr. Gray's comparison (J. R. A. S., Vol. X., N.S., p. 179), of the Máldive festival "*poyeaaas* (Pyrard) celebrated at the full moon of April or May" with "the '*depáya*' (full moon) of Wesak, when the Singalese commemorate the attainment of Nirwána by Gautama"; but, as Mr. Gray himself adds, "the Maldivans attribute the origin of the festival to the first introduction of rice to the islands, which would connect it rather with the *Alut Säl*, or 'new rice,' festival of Ceylon (held in January) than with the thoroughly Buddhistic holiday of May."

Whilst, therefore, the evidence available is both insufficient, and of a nature too vague, to warrant any definite conclusion, it is far from improbable that a close scrutiny of names of islands, of non-Muhammadan customs and festivals, and, above all, an archæological survey, will make it abundantly clear that Buddhist missionaries, in the spirit of the Aṣoka edicts, departing 'to intermingle among all unbelievers, teaching better things,' carried their doctrine across the sea even to the despised and little known Máldives.

[Since the above note was penned important evidence has come to hand in favour of the contention of "an intervening Buddhism" on the Islands :—

(*a*) The strikingly Buddhistic title "*Darumavanta*" (S. ධර්මවන්ත, *Dharmmavanta* 'Religious,' 'Just') applied by the Máldivians to their first Sovereign converted to Muhammadanism.

(*b*) Similarly, the undeniable significance of such island names as *Muñña-furhi* (? S. *Munipura*, 'Buddha's city') in Haddumatí Atol, *Huḷudeli* (S. සලදල, *saladaḷa* 'Bó tree' isle) in Nilandu Atol, *Vihama-furhi* and *Vihamanâ-furhi* ('the island of the delightful Wiháres,' Gray) in Ari and Mále Atols.

(*c*) According to the reliable assertion of resident natives, on the island of Fua Mulaku (lat. 0° 7′ S.) exist the jungle-covered ruins of a *tope* or *dágaba*, and amid them the stone image of a Buddha in the *sthána-mudrá* or standing position. This *tope* is described as resembling the solid bell-shaped *dágabas*, rising from platforms, usual in Ceylon.

Such ruins the Islanders of the Southern Atols term *astabu* (Aḍḍú Atol), *havitta* (Fua Mulaku), and *vére* (Atols further north), in which it is easy to recognise the Sanskrit *stúpa*, *chaitya*, and *vihára*.

"It may be that during long centuries no life was imparted to Maldive Buddhism from Ceylon, and that the religion of 'the Blessed One' at last *flickered to extinction*, while the barbarous rites and superstitions of the Dewales and the groves remained connected in the native mind with those purely temporal ills from which in their daily life men sought deliverance."]*

(8)

Chess.

CHESS.—Sir W. Jones assigns the invention of chess to the Hindús ('Asiatic Researches,' Vol. 7, 1803), and Major Forbes ('Eleven years in Ceylon,' Vol. II., p. 265), mentions the Hindú belief that it was originated by Rávaṇá's Queen, Wandódarí, during the tedious mythical seige of Śrí-Laṅká-pura.

The Sanskrit name for the game is *Chaturaṅga*, *i.e.*, 'the four members of an army,' which, according to Amarakósha, are *hasti* (elephants), *asva* (horses), *ratha* (chariots), and *pádátan* ('foot soldiers.') The same names are employed in India at this day.

Pieces.

English Game.	Sanskrit.	Máldive.
King	*Rájá*	*Boḍu.*
Queen	*Mantri*	*Mantiri.*
Bishop	*Hasti* / *Pilu*	*Boḍu-bo.*
Knight	*Asva*	*As.*
Castle or Rook ...	*Ratha* / *Roka*	*Riya.*
Pawn	*Padáti* / *Padica*	*Máná* / *Sipâi.*
Chess	*Chaturaṅga* (cf. S. *sivuraṅga keli*, සිවුරඟ කෙළි)	*Rázuvá kuli.* (cf. S. *Rájavil keli*, රජවිල් කෙළි.)

Máldive chess-men are of wood, roughly carved into the simplest of forms, in accordance with the Muslim prohibition against the making an image of anything that has life.

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* Gray, J. R. A. S., Vol. X., N.S., 1878, p. 180.

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Social Distinctions.

(9)

SOCIAL DISTINCTIONS.—Compare Mr. E. G. Thomas' account (Madras Journ. Lit. and Science, 1859-60) of the different class appellations borne by the inhabitants of Máliku (Minakai.) The divisions are :—

(1) *Malikans*	(3) *Klasies* (*Kalo*)
(2) *Malummies* (*Yáchurá*)	(4) *Maylacherries*

1. "The *Malikans* (about 116 in number) form the aristocracy of the Island. Three of them have considerable landed property there, and own all the trading vessels which go to Bengal, &c. Though now consisting of several families, they are all connected, being sprung from Kambakoth Kombaramy, who lived 200 years ago. They have by no means the over-weening influence exercised over their countrymen by the aristocracy of the Laccadive Islands. This is consequent on the different relative position of the parties. The Beebee of Cannanore has endeavoured more or less to identify their interests with her own, by supporting their wishes occasionally with reference to the conduct of their sailors, and by usually employing one of them as her Agent or Konnakar on the Islands.

2. "The *Malummies* are the pilots and mates of the vessels. This is no hereditary title, but is conferred by their neighbours for ability. Any man in Menakoy may obtain this rank, and is not then excluded from the society of the Malikans who will even intermarry with them. They number about 180.

3. "The *Klasies* (1,107 in number) form the bulk of the population, and, though in general poor, are exceedingly independent of the other classes. They possess no sea-going boats or vessels of their own, nothing fit to use far outside the lagoon; but they work the larger vessels and the *mass* [fishing] boats of the Malikans, as it is impossible for the merchants without their aid to carry on their trade: and as the Klasies are not landed tenants-at-will as in the Laccadives, but, with very few exceptions, small landed proprietors themselves, and only going to sea for regular wages given for work done at the time, they enjoy a very comfortable independent position, and both on land and at sea yield by no means implicit obedience to either Beebee or Malikans. "Besides those who are employed in the Beebee's and Malikans' vessels, many of them take service in English ships, and are absent for many years together. During this period they get high wages, but usually spend it all before they return to Menakoy.

4. "Those who follow the occupation of the *Maylacherries*, or tree climbers, are about 583 in number. They climb the trees of the ryots and the Beebee for hire, and extract the juice from which sugar is made."*

(10)

The Sultans of the Máldives.

THE SULTANS OF THE MÁLDIVES.—The rule of succession governing in the Malabar States generally, and notably in Travancore and Cochin, according to the usages of the Nairs in favour of descent in the female line does not appear to have extended to the Máldive Islands. On the death of a Sultan the Sovereignty usually passes to one of the sons. History—so much at least as has come to light—affords but three instances of a female succeeding to the throne—the first in the ninth century, the second four centuries later, (Khadíjah, *circa* A.D. 1344), and the last after the lapse of a similar period (A'miná, A.D. 1754).

The Máldive Sultans have assumed the fulsome cognomen *Iskandar*,—applied by Arab and Persian writers to Alexander the Great ("Iskandar Al Rúní"),—perhaps by virtue of supposed descent from the wide-ruling Iskandar Dhu'lkarnein (*i.e.*, 'the two-horned'), a Persian king of the first race, the contemporary of Abraham, and alleged tenth descendant from Noah, through Japhet and Elisha.

Other eulogistic epithets (clearly of Sanskrit origin) attached to the Sultans' names in written communications are explained elsewhere.†

The ordinary Máldive term for the Sovereign is *Rasge-fánu*, but the Arabic title *Sulṭán* is used to accompany his Muslim name after Muhammadan custom.‡ The Sultans' wives are called *Rasge-fánu Abi-kabalun*, and their children *Goma-fulun* or *Gon-fulun*.

Eligibility for future Sovereignty is betokened by the elevation of the umbrella over some member of the Royal family. This honour was conferred upon a younger brother of the Sultan during the residence of Mr. Christopher at Málé. "On this occasion there were great rejoicings in the

* Report on the management during Fusli, 1268, of the Five Laccadive Islands. † Vide Note (13) *infra*.

‡ A'miná is styled in her Minister's letters to the Dutch *Rasi-Mage-fánu*.

town. Guns were fired, and the public were entertained in the evenings with games, at the conclusion of which they were treated to a grand feast. On this day the young Prince was for the first time seen in public. The ceremony partakes of a religious character, inasmuch as the heir-apparent is required to proceed in procession to the mosque, and to the tombs of the principal saints to repeat the Fatha. The umbrella [M. *haï-koḷu;* S. ශත්, *sat.*] being one of the insignia of Sovereignty, none but the Sultan can have it carried over him."* Among other insignia borne by his attendants are a fan of peacock's feathers (M. *samara-koḷu;* S. සමරමල්, *semera),* a brass betel-box (M. *adaḡi forhi koḷa*), and ornamented slippers (M. *faivaṇ-koḷu).*

(11)

Sultan's Claim to the Property of Deceased Máldivians.

SULTAN'S CLAIM TO THE PROPERTY OF DECEASED MÁLDIVIANS.—This is confirmed by a statement in one of Sultan M. M'uin-ud-dín's letters of 1819 regarding the property of a certain Sayyid or Muhammadan Priest, towards whom the Sultan appears to have acted with much consideration and liberality.

" Strangers who take their refuge in this Island, and who, for want of money, may crave the assistance of Government, are always supported and kindly treated by us. But it is customary with Our Government on this Island when money is issued from the Public Treasury to individuals to enable them to carry on trade, at the death of such persons to take to Government alone all such property as they may leave behind, whether too little or too large *(sic);* so money is never issued but to those who consent to the above conditions. Nevertheless in this case of the Sayyid I have not taken one rupee from his estate. I have written these circumstances to Your Excellency thinking that it would be proper that Your Excellency should be acquainted with the same."†

Previously, in 1804, the Sultan having received intelligence that a suit had been commenced in Ceylon about the estate of a Máldivian named Don Kalége-fánu, requested that His Excellency the Governor would, "after investigation of the case, cause all the goods [of the deceased] and the money for the goods he disposed of there," to be delivered over to the hands of the Ambassador "as all of the same did not belong to his relations but to the Sultan's Court." *(sic.)*‡

Upon another claim to a house in Ceylon made by the same Sultan in 1830, it was considered advisable to point out that Máldivian law had no extra-territorial effect in civil proceedings *in rem.* "There are Courts of Law established on the Island," wrote Sir E. Barnes, "which are open to all persons; and Your Highness may order your Agents to have recourse to the Courts for the recovery of any property Your Highness may have to claim; and the case will be decided according to law and justice: but it is not customary for Government to interfere in such cases wherein the rights of property of the inhabitants are concerned, and which may be decided by law by the Courts of Justice appointed for that purpose."§

See also Lord Torrington's reply (1850) regarding 'Alí Dídí.‖

(12)

Government.

GOVERNMENT.—The constitution of the Máldive Government has ever continued to retain the main features of the ancient Indian polity, based on the Institutes of Manu, and followed "throughout the history of Ceylon. At the head the King [*Mahá Rája*], bound by no law, but never altering the law; his despotism only restrained by his own sense of justice or fear: at his Court one or more ministers, [*Meti, Mantri*], among whom the departments of State were sometimes divided, but to anyone of whom usually an appeal lay from every inferior officer, and who [as the *Amátya-maṇḍalé* or Council of State] advised the King, or administered in his name, on all affairs: over each province a Chief [*Yuva-rája*], bound to pay into the Treasury not the exact revenue he received, but a lump sum, and intermediate appeal judge in all cases arising in his district: under him, again, inferior officers, some of whom were clerks and accountants with specified duties, others petty territorial headmen over villages or small districts, with judicial as well as administrative power."¶

A comparison of the modern designations of the Máldive Sultan's Ministers of State, and their respective functions, with those recorded by Pyrard as ruling at the commencement of

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* Trans. Bom. Geo. Soc., 1836-8, p. 66.

† Sultan's letter, A. H. 1235; (translation dated November 16th, 1819.)

‡ Sultan's letter, (translation) dated November 2nd, 1804.

§ Governor's reply, dated December 18th, 1830. ‖ Governor's reply, dated October 4th, 1850.

¶ Rhys Davids, J. R. A. S., Vol. VII., Pt. II., N.S., Art. XVII., p. 370.

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the 17th century, and by Ibn Batúta two and a-half centuries earlier, discloses that, whilst a redistribution of duties may have occurred from time to time, the official titles at least have suffered but slight change.

Of these the majority bear intrinsic evidence of ancient A'ryan origin.

(*a*) *Hadégiri*, in whom are combined now-a-days the offices of Chief of the Treasury and Receiver-General of Revenue (Chris., *Hindeggerce;* Pyrard, *Endequery*, "a Lord Privy Councillor, always in attendance upon the King;" but Ibn Bat. *Hendidjéry*, 'Preacher'). Cf. *Bhándágáriko amachcho*, the Lord High Treasurer of the old Siṇhalese Court (Turnour's Mahávaṇso, p. 231, 3).

(*b*) *Dorhiméná*, (Chris., *Durimind*, 1st Vizier, "Chief or General of the Army;" Pyrard, *Dorimenaz*, *Torimesnas*, "Commander-in-Chief of the Army;") possibly the *Dvára-náyaka* (Mah., p. 260, 10), but cf. T. துரை, *turai*:

(*c*) *Fámudéri* (Chris., *Fumederi*, 4th Vizier; Pyrard, *Pammedery calogue*, one of the great lords; Ibn Bat., *Fâmeldâry* "Receiver-General of Revenue." Cf. S. පාමොක්, දෙපි; *pámok*, *deṭu*, and the *Amachcha Pámukha* (Mah., p. 69.)

(*d*) *Máfuí* (Chris., *Mafae*, 5th Vizier; Pyrard, *Manpas*, "Chancellor, Keeper of the King's Privy Seal;" Ibn Bat., *Mâfâcaloû*, "Receiver-General of Revenue.") Cf. S. මහා, *mahá*, and පති, *pati*, in *Senápati*, *Chamupati* (Mah. *passim*).

(*e*) *Dáhará* (Chris., *Dahara*, 6th Vizier; Pyrard, *Darade Tacourou*, "Count or Duke." Cf. the *Dovárika* (Mah., p. 117, 11.)

Ibn Batúta makes no mention of the *Dorhiméná*, *Hakurá* (Chris., *Hakura;* Pyrard, *Acouraz*) and *Velánd* (Chris., *Wilono Shadander;* Pyrard, *Velannas* "First Lord of the Admiralty and President of the Board of Trade") Viziers; but styles "the Minister of Police" *Fitnâyec*, and the "Admiral" *Mânâyec*. Cf. S. මහා, *mahá*, නායක, *náyaka*.

(13)

Without attempting in the compass of a Note to enter into a lengthened comparison of Siṇhalese and Máldive vocabularies, already partially essayed by Mr. Gray (J. R. A. S., Vol. X., Art. VIII.), it may strengthen the position assumed regarding the affinity of the two languages (whilst serving of interest on other grounds) to insert here a fac-simile of one of the annual letters of the Máldive Sultans of the last century, with a transcript in Roman characters and an English translation.

It will be at once seen that the proportion of words clearly traceable to Siṇhalese or Sanskṛit sources is large, amounting to at least 65 per cent.

TRANSCRIPT.*

Ḥuwa' l ghaní.

Suvastí sirímata mahá sirí bari kusa furadé:
: na sirí kula sada ira siáka sástura audána Ka:
: ttiri *As-Sulṭán Hasan Núr-ud-dín Iskandar* Kattiri Bowana
Mahá Radun. Koḷubu Gorunu Dóre-ve kiyá Rasge-fána' mita'
lakka hás farhuṇ *salám*. Maniku-fánumeṇgo Koḷubu-gai ihu u:
: luṇvi Ras-Ras-kalunnái, mi Divehi Rájjé-gai ihu uḷuṇ:
vi Ras-Ras-kalunnái ra*hmat*rikaṇ behetṭevi fadaiṇ-me, Mani:
: ku-fánái Timaṇ Maniku-fánu hif-fuḷu-gai *rahmat* bahaṭṭavaigeṇ hunne:
: víme. Maniku-fánumeṇ kibaiṇ edi-tibímáve. Mi Divehi Rájjeiṇ oḍi;
: ye' dóñe' behigeṇ gos Maniku-fána' *khabar*i-vé tanaku tibi na:
: ma, e bayaku geṇdavai, e míhuṇge haihúnu-kaṇ bellavumái. Mi Divehi
Rájjea' '*adá*vátteriaku Maniku-fána' egijje nama, e bayaka'
Maniku-fánumeṇ nu-russevumeve. Maniku-fánumennái arafódigeṇ-
nuvá kuḍa hadiyá-koḷa-kái *Ahmad* Kuḍa Baḍéri Kéví tiá fonuvvímu. Mi a:
: ḷá dennevi kame' kuravvai; mi aḷuṇ kibain *taksír* vias *mu'áf*
: kuravvai. Avvalu músumu-gai furuvá kama' edi-vaḍaigeṇ hunne:
: víme. 1210 *sanat*.

* The Máldive character (*gabuḷi-tána*) is transliterated as far as possible according to the system recommended by Sir William Jones and Professor Wilson, and adopted by the Ceylon Government (Minute of November 16th, 1869), for the Siṇhalese and Tamiḷ languages.

هو الغني

[illegible]

السلطان نور الدين اسلام [illegible]

[illegible]

[illegible]

[

TRANSLATION.

He (God) is the richest !

Hail! Sultan Hasan Núr-ud-dín Iskandar, Mighty Monarch of the Universe, a Kshatriya, endowed with beauty, possessed of great wealth, who imparts wisdom, (born) of illustrious race, resembling the sun and moon, conversant with arts and sciences, of unsullied (fame), to the Ruler namely, the Governor of Colombo, many million salutations! As the former Rulers at Colombo—Your Excellency's predecessors—and the former Rulers of this Island Kingdom (Máldives) preserved mutual friendship, Your Excellency and Ourselves have borne (reciprocal) friendship in our hearts. May this (amity) continue on Your Excellency's part! Should any Máldive vessel *(odi* or *dóni)* be driven ashore at any place with which (Your Excellency) is acquainted (We request that Your Excellency will kindly) send for those (shipwrecked) persons, and enquire into their wants. Should Your Excellency be aware of any persons ill-disposed towards this Island Kingdom, (be pleased to) show them no countenance. We send for Your Excellency's acceptance—all unworthy though it be—a small present by the hands of (Our Ambassador) Ahmad Kuḍa Baḍéri Kéví. (We beg Your Excellency will kindly) issue directions, that his requests be attended to. Should he commit any fault, (We hope that Your Excellency will) pardon it. (We trust that Your Excellency will) allow him to return in the favourable monsoon. A.H. 1210 (A.D. 1795.)*

EXPLANATORY NOTES.†

*Suvasti * * * * Mahá Radun.* Adopting the above translation, the Sultan's title may be rendered into Siphalese as follows :— සැප වේවා ; ශ්‍රීමත්වූ ; මහත් ශ්‍රී ධරන්නාවූ; ප්‍රඥා ප්‍රදානකරන්නාවූ ; (කල්‍යාණ දායකවූ) ; ශ්‍රී වංශ ඇති ; හිරසඳ බඳුවූ ; ප්‍රත්‍යක්ෂ ශාස්ත්‍ර ධාරිවූ ; ශුභ්‍ර (කීර්ති) ඇති ; ක්ෂත්‍රිය වංශ ඇති ; ලෝකයේ මහා රජ : *Sepa vévá; śrímatvú; maha śrí dharannávú; prajñá pradána karannávú; (kalyáṇa dáyakavú) śrí vaṇsa ẹti; hira sanda banduvú; pratyaksha śastra dhárivu; śubhra (kírti) ẹti; kshatriya vaṇsa ẹti; lókayé mahá rája.*‡

Mahá siri-bari = S. මහා ශ්‍රීභාරී, *mahá śrí-bhári*, 'possessed of (a great weight of immense glory" (or) 'wealth.' Cf. *inte ralia* inscriptions at Ẹlaveṇa Pansala and Ẹtavíragolleva (Goldschmidt, C. A. S. Journ., 1879, p. 34.) In some letters *diri* takes the place of *bari: diri* may equal S. ධෛර්‍යී ඇති, *dhairyya ẹti*, 'courageous' (*S. D.*); but, as reasonably also, S. දුල, *dula*, 'glittering,' 'splendid,' by metathesis දිලි, *dili*, thence දිරි, diri.

Kusa furadána = S. කුශ ප්‍රධාන, *kuṣa pradhána*. The meaning 'wisdom' = S. ප්‍රඥාව, *prajñáva (D.)*, or 'goodness' = S. කල්‍යාණ, *kalyáṇa*, has been assigned to *kusa*. The compound will also bear the sense, 'lord of the waters' = S. ජලප්‍රධානවූ, *jala prádhánavú, (S.)*, and 'Chief of Kusa,' *i.e.*, one of the great *dwípas* or divisions of the universe, *(S.)*, some letters reading *kusha* (S. කුශ, *kusha.*)

Sada ira :—The order of Sanskrit compounds is here followed, *hira sanda* becoming *sanda ira*, and by abbreviation *sada ira.*

Siáka sástura ;—Siáka, a doubtful word. Subhúti proposes to read *siyána* (Hindí) 'clever' or 'wicked,' and renders the compound by *(a)* S. දක්ෂ අනුශාසකවූ, *daksha anuṣásakavú*, 'skilful teacher' or 'commander,' or *(b)* S. ධූර්ත ජනයාට ශත්‍රුවූ, *dhúrta janayáṭa satruvú* 'enemy of wicked men.' Dhammáloka, deriving *siáka* from Sans. *sáyaka*, 'bow,' would make it *(c)* = S. ධනුර්ධ්‍රවූ, *dhanurdhravú*, 'skilled with the bow.' Guṇasékara suggests :—*(d)* = *Shiáka satura (satru)* 'enemy of the Shía'hs (heretics,)' *(e)* = 'subduer of (his) passions,' *i.e.*, S. ශිය, *siya*, 'own ;' අක, *aka* (Sans. *aksha*, 'organs of sense.') *(f)* = S. ශිය, *siya*, අක, *aka*, 'eye ;' S. ප්‍රත්‍යක්ෂ, *pratyaksha*, 'experienced,' coupling it with *śástura*, S. ශාස්ත්‍රාවූ, *śástruvú*, 'experienced teacher.'

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* In Bennett's "Ceylon and its Capabilities" (London, 1843), opposite to p. 252 may be seen a fairly correct copy in lithograph of Sultan M. Mu'ín-ud-dín's letter to the Galle Commandant in 1825 ; and at p. lxiv. of the Appendix the rough official translation. Lieut.-Colonel Campbell ("Excursions, &c., in Ceylon," Vol. I., pp. 199, 200) also gives a like translation (dated January 3rd, 1821) of a letter from the same Sultan, received by him when in command of the detachment at the Southern port. For another specimen of Máldive writing, see the private letter at the end of Christopher's Maldivian Vocabulary, (J. R. A. S., o.s., Vol. VI.)

† A complete glossary is held over for the Ceylon A. S. Journal.

‡ Towards the elucidation of these complimentary epithets valuable aid has been generously afforded by the learned scholars Waskaḍuwé Subhúti Unnánsé (*S.*), Dhammáloka Unnansé of Ratmaléna (*D.*), and B. Guṇasékara, Government Translator (*G.*).

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The last translation has been followed.

Audána :—appearing almost invariably in immediate connection with *kiriti* (S. කීර්ති *kirtit*, 'fame,')—may perhaps be traced to Sans. *avadáta*, 'white' 'unsullied' (*G.*)

Bowana :—Older letters give the true form *buvana* (S. භුවන, *bhuvana*, 'the universe.')

The list of magniloquent epithets—'great swelling words of vanity'—employed by the Sultans in their annual letters to the Ceylon Governors has strangely waxed and waned, so to speak, since the commencement of the 18th century.

Sultan Imád-ud-dín Muzaffar (A.D. 1711 ?—1721) was content to affix to his name, *Rannavalóka Mahá Radun.* By 1750 Máldivian official bombast had reached the height, beginning *Suvastí, &c.*, and attained its zenith some twenty or thirty years later. Reaction then ensued, and in letters subsequent to 1805 (?) the Sultan's Arabic titles have been followed merely by the words, *Kula Sundura Kattiri Bowana Mahá Radun*—expressions which Christopher considered "unexplainable at the present day."* The fuller string of epithets is still prefixed to orders and communications issued by the Sultan to his subjects.

Rasge-fánu :—*V. s.*, p. 76, Note (10). In early letters of last century sometimes written *Radunge-fánu*, or *Rasge-fánanse. Fánu, fananse,* = S. වහන්සේ, *vahansé*, honorific affix, by consonantal change through *vanansé.*

Maniku-fánu-men :—*V. s.*, p. 63.† Euphemistic plural-singular.

Fadaiṇ-me :—'as,' 'in the manner,' = S. පරිදි, පරිද්දෙන්, *paridi, paridden*, by rejection of liquid medial consonant ; *me* = S. මැ, *ma*, intensive suffix.

Hif-fuḷu-gai :—'in mind,' loc. = *hit* (S. හිතේ, *hité*) + *fuḷu* (honorific) + *gai* (*gátun*, 'near'), by euphonic assimilation.

Behigeṇ gos : = S. බැහිගන ගොස්, *bęhigana* (බැහිනවා, *bahinavá* 'to descend') *gos* ; Pyrard, *behigue*, a term applied to being driven by the current.

Arafódigeṇ-nuvá :—'in all humbleness,' 'unworthy though (the giver and the present) be.' Alternative forms in older letters, *ara hódi, arai hodí, aranu hóde, arainu hóde.* Cf. Pyrard, *vedon a Rouespou*, the present paid to a delegate of the Sultan. Christopher, *vedun*, 'present.'

Baḍeri :—*V. s.*, p. 66 ‖ 'Hadégiri.' Originally confined to the Treasurer or Keeper of the Royal Stores (S. භාණ්ඩාගාරික, *Bháṇḍágáriká*), the title, as in the Kandyan districts of Ceylon, gradually acquired a wider use, though still restricted to persons of high birth.

Kévi :—? *Névi*, *q. v.*, p. 63 ‖ *supra.*

Aḷá, aḷuṇ :—Cf. T. ஆள், *ál*, 'person.' *Aḷu-gaḍu, aḷu-gaḍu-men*, the ordinary designation employed by the Sultans and Máldivian nobles when writing of themselves in the first person. *Gaḍu, koḷu, fuḷu (e.g., hadíyá-koḷu, hif-fuḷu)*, honorific suffixes, generally implying connection with Royalty.

Avvalu * * * * *hunnevíme* :—A periphrasis for the simpler expression, occasionally found, *daturu* (H. *játrá*) *avas-kurravvai*, "(kindly) hasten (his return) voyage." *Vaḍaigen.*—Cf. the Siṇhalese complimentary use of වඩිනවා, *vaḍinavá*, as applied to Buddhist priests.

Some ruling vowel and consonantal changes from Siṇhalese into Máldivian may be noticed :—

Vowel Changes.

Siṇhalese	*a*,	becomes Máldive	*e*,	(S. *danpanavá, balavanavá* ; M. *dennevi, bellavumai*)
			i,	(S. *tamun* ; M. *timan*)
			o,	(S. *evanavá* ; M. *fonuvvímu*)
			u,	(S. *ihaṭa, karanavá* ; M. *ihu, kurravvai*)
„	*i*,	„	*u*,	(S. *innavá* ; M. *hunnevíme*)
„	*u*,	„	*a*,	(S. *tamun* ; M. *timan*)
			o,	(S. *bhuvana* ; M. *bovana*)
„	*e*,	„	*i*,	(S. *mé, tibenavá* ; M. *mi, tibi*)
„	*o*,	„	*u*,	(S. *no-(rusanavá)* ; M. *nu-(russevumeve)*
„	*e*,	„	*e*,	(S. *hęngenavá, tęna* ; M. *egijje, tana-ku.*

* Even in the official translations (English) these words appear simply transcribed as part of the Sultan's name The Dutch translators entirely ignored them.

Consonant Changes.

Siṇhalese	*t*,	becomes Máldive	*r*,	(S. *piṭatvenavá*; M. *furuvá*)
„	*d*,	„	*h*,	(S. *dás*; M. *hás*)
„	*n*,	„	*ḷ*,	(S. *unna*, *uluṇ*)
„	*p*,	„	*f*,	(S. *pradhápa*; M. *furadána*)
„	*v*,	„	*f*,	(S. *evanavá*, *vara*; M. *fonuvvimu*, *farhun*)

Many words, purely foreign or of probable foreign origin, occur :—

Arabic :—*Iskandar*; *salám*; *rahmat*; *khabar*; *adá*; *hadíyá*; *takṣír*; *mu'áf*; *musímu*; *sanat*.

Tamiḻ :—*Dóre* (துரை, *turai*); *mita* (மிச்சம், *michcham*); *Ras* (cf. T. form அரசன், *arasaṇ*); *oḍi* (ஓடம், *ódam*); *dóñe* (தோணி, *tóṇi*); *koḷu*, (? கொளு, *kolu*); *aḷá*, *aḷun* (ஆள், *ál*).

Malay :—*Edi* (? *ada*, 'be.')

Dutch (English).—*Gorunu* (Governor.)

Truly "a party coloured dress
of patch'd and py-ball'd languages."

(14)

TARTIB.—Copies of these commentaries on the Kurán are now freely exposed for sale in the boutiques at Málé, at from Rs. 1 to Rs. 1½ each—a faint, but possibly hopeful, sign of mental awakening too long delayed.

In 1835-36 Captain Moresby thought that the natives did not "appear indifferent to improvement, for all (particularly the chief) evinced a strong desire to become acquainted with our language and with our knowledge."*

This is unfortunately contradicted by facts. Governor Mackenzie offered, in 1838, to educate, free of cost, two Máldive boys chosen by the Sultan and sent over to Ceylon for the purpose. "Having understood," the Governor writes, "that it is the wish of Your Royal Highness as well as that of many of your subjects to be taught the English language, I am prepared to give them the opportunity of acquiring that language without any cost to themselves, and I invite two of Your Royal Highness' subjects, not exceeding 16 years of age, whom you may be pleased to select and send to Colombo. I would also propose that those youths should be accompanied by some members of their own family, who will be kindly received on a temporary visit. They will have the means of seeing where the scholars are to be settled, and of being satisfied as to the place and situation where the two youths will reside while they remain in Ceylon to learn the English language."†

The Sultan's answer of the ensuing year, though couched in language studiously polite, destroyed any hopes which might have been entertained that the time was ripe for this experiment. "Your Excellency has been pleased to desire us to send from our dominions two youths below 16 years of age to your Island for the purpose of being educated in your language, without any expenses to us, either, for their education or boarding, and, moreover, that two of our people may be sent thither, to see if these youths are well settled and confortably kept there. This proposal, we are aware, emanated from Your Excellency with a view of promoting and perpetuating the good understanding existing between us, but we regret that our religious principles do not allow us to avail ourselves of the benefit of the kind offer thus made by Your Excellency, because our religious tenets prohibit our children being so instructed in their youth.'‡

This reply was at the time accepted as "decisive against education and conversion of the Maldivians," for the subject was not again broached.

Happily, the course of events in the interval of forty years had led, though by an indirect channel, to a partial realization of the enlightened objects contemplated by the Right Honourable J. A. Stewart Mackenzie.

A chance law-suit brought over to Ceylon, in 1850, the Sultan's cousin, 'Alí Dídí, son of the late astute Prime Minister Ahmad Dídí (*V. s.*, p. 37.) Settling ultimately at Galle, where he died a few years back in affluent circumstances, he gradually established, as the recognised Máldivian agent, a brisk through trade between the Islands and Indian rice ports.

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* Trans. Bom. Geo. Soc., 1836-8, p. 108.

† Governor's letter, dated November 26th, 1838.

‡ Sultan's reply, dated Sháwwán, A. H. 1255.

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His son (Ibráhím Dídí) and nephews ('Alí and Isma'íl Dídí), as they grew up together, in addition to acquiring a fair knowledge of the English language, imbibed involuntarily just impressions of European breadth and freedom of thought, which, with advancing years, have taken deep root.

Háji Ibráhím Dídí is now the most trusted adviser of his Sovereign, and in all matters of moment is summoned to the aid of the Council at Málé. He and his cousins may yet live to exert a salutary influence on the future destiny of the Máldivian race, by weening the minds of the ruling aristocracy from the narrow exclusiveness and "Cimmerian darkness of ignorance" in which they have persistently been enveloped.*

* For a sweeping condemnation of the English policy in India regarding Muhammadan education, see the trenchant remarks of Dr. W. W. Hunter, B.C.S., in his "Indian Musalmáns," Chap. IV.: 'The wrongs of the Muhammadans under British rule.'

VI.—PRODUCTIONS AND MANUFACTURES.

THE Máldive Islands present a field of botanical and zoological research, almost unexplored, but hardly likely to yield much fresh store of plant and animal life, judging by results obtained on the more Northern and very similarly situated group.

A short cruise among the Lakkadives sufficed to establish that "they have no distinctive Fauna or Flora: no mammals, except the common Indian *Mus rufescens*, that even in the neighbourhood of Calcutta infests cocoanut trees: no land birds, except a very few of the commonest Indian species: no non-Indian plants, the flora consisting mostly of species common on the sea-coasts of India, and more or less diffused over China, Java, and the Straits, extending in many cases to the Malayan Archipelago, Australia, and the South-Sea Islands, and in several to the tropics generally: that the majority of the species of plants possess, according to native ideas, medicinal properties, and are, therefore, just those most likely to have been introduced by human agencies; and that, as a matter of fact, it is in the largest island, where the population is greatest and the communication with the mainland has been on the largest scale, that the number of species is greatest.*

VEGETATION.†

Vegetation.

At a little distance most islands appear "a mass of vegetation down to the waters' edge, dense with cocoanuts above and screw pines below." The undergrowth, in which the rich green fleshy-leaved *scævola* everywhere stands out prominent, runs riot in entangled luxuriance of growth, impenetrable in places.

Cocoanut.

The fine coraline sand of these low-lying sea-girt Atols is peculiarly suited to the growth of the cocoanut palm *(Cocos nucifera)*, which thrives with a vigour and luxuriance unequalled, save, perhaps, on the Polynesian groups.

At least three distinct species are found, bearing fruit ranging in size from the huge gourd-like nut (M. *ubukaḍá kárhi)* to the tiny nut not much larger than an orange (M. *furedde oḍi kárhi)* so valued for its copperah.

To the Islanders, the economic value of the cocoanut is incalculable. "It is far the best and most wonderful manna imaginable; inasmuch as this single tree can provide every necessary of life for man, supplying him with wine, honey, sugar, milk and butter in abundance. Moreover, the kernel or almond may be eaten as bread with viands of all kinds; besides which, the wood (of the tree) and its leaves, with the husk and shells (of the fruit), serve for the manufacture of the greater part of their furniture and utensils."‡

Timber Trees.

Few indigenous trees are fit for timber. In boat-building resort is had almost exclusively to the cocoanut. The tall straight *varu* and *mas kadu* (M.)—the softest and lightest of their woods—are not sufficiently durable for this purpose, but the latter is used for rafts (M. *kadu-fati.)*

The *duburi* (S. *domba, Calophyllum inophyllum)* is well adapted for the minor wood-work of their houses, as wall sticks, &c., and is valuable also on account of the gum resin which exudes from the tree when wounded, and for the medicinal oil obtainable from its seed.

Of large trees the most noticeable are the *los* (the *bois mapou* of the Chagos), *kadu*, and *hirundu* (S. *súriya, Thespesia populnea)*. The banyan (M. *nika, Ficus indica)* is hardly less rare than the bread-fruit (M. *bamba-keyo, Artocarpus incisa)* and jack (M. *sak-keyo, A. integrifolia.)*

A dark and extremely tough wood which the Islanders much rely upon is the *kuradi (? Pemphis acidula)*. This tiny-leafed tree—or rather shrub, for it rarely exceeds 15 to 20 feet in height—grows on nearly all the islands. Its wood is selected for implement-handles, wall-plates, cross-beams and pieces in houses and boats—in fact, wherever strength and durability are needed.

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* Allan Hume, in "Stray Feathers," Vol. IV., 1876, p. 459. † Note (1).

‡ Pyrard, p. 85, who later (*Traitté des animaux et des arbres et fruits des Indes*, pp. 22-33), devotes a special chapter to this "wonderful tree."

THE MALDIVES.

PRODUCTIONS AND MANUFACTURES.

From the scarcity of good timber a high value is set on teak and other hard woods, occasionally obtained from wrecks. Some timber is annually imported.

Pandanus.

The natives make some use of the fruit of the *Pandanus*, but would seem to be otherwise ignorant of, or indifferent to, the many serviceable purposes to which this despised tree is capable of being turned.* The leaves even are no longer used as a writing material.

Fruit.

At Málé and other populous islands, a variety of exotic fruit trees are found, which have been introduced gradually from the continent. Such are the lime *(Citrus limetta)*, biling *(Averrhoa bilimbi)*, and almond *(Terminalia catappa)*, with bananas, oranges, pomegranates *(Punica granatum)*, rose apple *(Jambosa vulgaris)* shaddocks *(Citrus decumana)*, custard-apple *(Anona squamosa)*, guava *(Psidium pyriferum)*, and pine-apple. The areka palm *(Areca catechu)* is rare, necessitating the importation of the nut, on which the Islanders set great store for mastification with the leaves of the betel-creeper *(Chavica betle, Mig.)*

Vegetables.

Among esculent vegetables cultivated are chillies, pumpkins, brinjals *(Solanum melongena)*, and several yams, notably a large bulbous root, "round and large as the two fists," in shape and appearance much resembling an ordinary potato, called *hittala* (? S. *hiritala, Dioscorea oppositifolia)*, which, after being grated down and steeped in water for some time, is dried, and forms a very palatable flour.† "The castor-oil plant *(Ricinus communis)* is very common, and appears to be indigenous, but the seed is not collected either for domestic use or exportation." A little cotton (M. *kafa*, S. *kapu*, *Gossypium Indicum)* is grown, chiefly in Miladummadulu Atol.

Fine grain.

Rice will not thrive, but two kinds of millet are raised on the Southern Atols—*Setaria Italica* (M. *urá*, S. *tana hál)* and *Panicum miliaceum* (M. *kudibai*, S. *menéri)*,‡ and some nacheri or *kurakkan (Cynosurus corocanus*, M. *bimbi)* at the North of the group.

Flowers.

Pyrard says the Islanders are passionately fond of flowers, which bloom perennially in great variety, using them commonly as chaplets, garlands, &c. He particularises the *innapa* [*híná-fal*]—used as in Persia for dyeing the hands, feet, and nails red—the *onnimaus* [*uni-má*], a white sweet-scented flower, that falls after twenty-four hours, and the *iroudemaus* [*irude-má*], the *súriya-kántá* or 'sun-flower' of the Siṇhalese. Roses (M. *fini-fen-má)* are not unknown at Málé, but are cultivated with difficulty.

ZOOLOGY.§

Zoology.

The zoology of the Islands is only redeemed from complete insignificance by a fair show of sea-birds, terns, gulls, &c. (all known species), and an extensive ichthyology, yet unworked.

Animals.

Domestic animals are everywhere scarce. Except a few cattle kept for the use of the Sultan at Málé, the only ruminant reared is the goat.‖ Cats are not common, and the dog and pig, as unclean animals, are naturally absent.¶ The mongoose (M. *mugarhi; Herpestes griseus)* is rare.

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* See Cooper, "Coral Lands," Vol. II., pp. 220-37, London, 1880.

† Trans. Bom. Geo. Soc., 1836-8, p. 80. Pyrard, *itelpoul*. Ibn. Bat, Tome IV.

‡ "All the Máldive Islands are destitute of grain, except that in the Province of *Souweïd* [*Suvádiva*] there is a cereal like the *anly* which is brought thence to *Mahal*."—Gray, quoting *Ibn Bat.*, Tome IV., 112.

§ Note (2).

‖ Horses have been rarely imported into the Islands, and are retained for the exclusive use of the Sovereign. Ibn Batúta (A. D. 1344) scandalised the natives by venturing, even as Kází, to ride one of the only two—a stallion and a mare—then kept in the Royal stables. Sultan Ibráhím Iskandar obtained a horse from Ceylon in 1724 (D. R. Miscell.), and more than a century later (A.D. 1840) Ahmad Dídí induced the Ceylon Government to present his son with a horse, saddle and bridle. In November, 1879, there were but two horses at Málé, "wretched wry-legged weeds, not fit to ride," and apparently, with a caged leopard, &c., merely forming a motley menagerie.

¶ De chiens il n'y en a point, et dauantage ils ont en horreur. Pendant que j'y estois les Portugais de Cochin en ennoyerent deux au Roy par rareté, qui les fit incontinent noyer.—Pyrard, p. 88.

Animals.

The "flying-fox" (M. *vávulá, Pteropus Edwardsii)* is very plentiful, and only second in destructiveness to the cocoanut-rat (M. *bodu midá, Mus rufescens.)* As in the Lakkadives; these rats are a source of great annoyance and loss to the natives. "Living up in the crowns of the cocoanut-palms they incontinently drop the nuts on the heads of passers by and otherwise seriously diminish the outturn of the trees,"* by eating into the nut, or by drinking the toddy. Minor pests are ants and mosquitoes.† To escape the ravages of the former, granaries have to be built on piles some distance into the lagoons.‡

With the exception of the ubiquitous scavenger crow—nowhere more persistently obtrusive than at the Máldives—and the half-wild domestic fowl, the only land bird is the Indian koil, *Eudyamys honorata* (M. *kaḷu* and *diḍi kovili.)* Pigeons and parrots are occasionally met with, but are migratory.

Birds.

Of the ordinary sea-birds, turnstones *(Strepsilas interpres)*, noddies *(Anous stolidus)*, and terns *(Sterninae)* are numberless, and herons *(Ardeidae)* very common in the shallows. A variety of teal come over from the continent in large flocks at certain seasons.§

Reptiles.

Lizards, "blood-suckers" and *geckoos*, frequent gardens and houses, as on the coast, but noxious reptiles are confined to the sea. The 'water-serpents,' *Hydrophis Spiralis* (M. *fen-harufá)* and *Pelamis bicolor* (M. *máridá)* are much dreaded by the natives. The only land snake known is the harmless *Lycodon aulicus* (M. *nannagati).*

Turtle.

These Islands would seem to be a special habitat of the turtle; from the largest —the logger-head (M. *musimbi, Couanea olivacea)*—or *velá*, the shell of which is sometimes of sufficient size to roof a hovel, and accommodate ten or more persons seated‖—to the smaller edible (M. *kahabu, Chelonia virgata,)*¶ and hawksbill turtle *(Caretta imbricata)*, which supplies the tortoise-shell of commerce. Many small islands were entirely covered by them formerly, and the supply has always exceeded the greatest demand. "They commonly take turtle while it is floating at the surface, and also when it lands."** On Sultan's Island the small fresh-water tortoise (M. *kanza kahabu, Emys trijuga)* is found in tanks.

Fish.

It has been claimed for the Máldives that no place in the world can vie with them in the abundance and diversity of the fish caught in the encircling seas.†† Within the Atol lagoons coral-fish of every hue may be descried. The *bêche-de-mer (Holothurion)* is found, but the collection of this sea-slug does not form an industry as in the Polynesian groups.

The much dreaded shark, large (M. *miyaru*, the *tuberão* of the Portuguese) and small (M. *femunu)*, is only too plentiful. "The natives catch the largest sharks with a hook. While the fish remains within the Attol in 20 and 30 fathoms depth of water, they pay out a long scope of line, and the shark when unable to descend deeper darts onwards horizontally, dragging the boat after him, but if a large fish is hooked and it dashes outside of the islands into deep water, they immediately cut the line asunder for fear of accidents."‡‡

The sword-fish (M. *hibaru, Xiphias gladius)* is common, "and sometimes attains 18 feet in length." Porpoises (M. *kó-mas)* yield some oil,‡‡ and the dried skins of the larger Rays, when well stretched, still serve to cover drums and tambourines.§§

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* Allan Hume, "Stray Feathers," Vol. IV., p. 433. The Lakkadive Islanders organize fortnightly rat-hunts *(koot)* to keep down their number.

† "There was a vast number of mosquitoes or gnats that made the blood run where they stung." Stephen's Faria-y-Sousa, Vol., III., Ch. XI., p. 397, of the shipwreck of D. George de Almeyda on the Máldives in 1631. Cf. Mr. Thomas (Madras Journ. Lit. and Science, 1859-60) of Minakaï.

‡ Pyrard, p. 87.

§ Trans. Bom. Geo. Soc., 1836—8, p. 79.

‖ So Pyrard *(Traitté*, &c., p. 5), and cf. Tennent's Natural History, p. 293.

¶ The Máldivians, according to Pyrard, resort to "the cruel expedient" of suspending turtles alive over fires to obtain their shell. Cf. Tennent, *loc. cit.*

** Trans. Bom. Geo. Soc. 1836—8, p. 79.

†† Pyrard *(Traitté*, &c., p. 7.)

‡‡ Trans. Bom. Geo. Soc., 1836—8, p. 79.

§§ Pyrard, *loc. cit.*, p. 8.

THE MÁLDIVES.

PRODUCTIONS AND MANUFACTURES.

As fishing is "the most constant exercise" of these Islanders—the *bonito* fishery in particular having mainly supplied them with the means of subsistence for centuries—Pyrard's detailed description of the various times and modes of fishing adopted at the Máldives will not be out of place:—

Bonito fishery.

"The fish which are taken in the deep sea about six or seven leagues off the bars of the *Attollons* are large and of seven or eight sorts, such as bonitos, albacores, guilt-heads, &c., which are all much of the same taste, and have no more scales than a mackrel. The instruments with which they catch them are a line of a fathom and an half of great cotton thread tied to a cane, together with a hook that in form resembles the letter *h*. The bait is not fastened upon the hook, but thrown about into the sea; for they drag after their boat a quantity of small fish like our roaches, which are very numerous among the banks and sands, and which are preserved alive in purse-nets of cocoa-thread; and when they come to the deep sea they cast these little fishes about, and throw in their line. Upon which the great fishes perceiving an unwonted quantity of little fish crowd upon them in shoals, greedily swallow the whitened hook, taking it for one of the little fish. The fish that swallows the hook falls off as soon as the line is brought into the boat, and so the line is thrown in again. At this rate they will fill their boat with fish in three or four hours' time,* and (which is very strange) the boat is all along under sail. The fish thus taken are all black, from whence they are called *cobolly masse* [*kaḷu-bili-mas*] *i.e.*, 'the black fish.'†

Other modes of fishing.

"They have another way of fishing in the night time upon the banks that surround the *Attollons*. At every full and every new moon they convey themselves to the banks upon hurdles [or rafts, *kadu-fati*], and the fishing lasts three days every time. 'Tis performed by lines of hard coarse cotton thread, some of which are fifty or sixty fathom long, and are blackened over with the bark of a tree that serves instead of pitch, in order to preserve it from corruption. At the end of this line they have a hook with a bait fastened upon it, after the same manner as is usual among us. By this means they catch a prodigious quantity of large red fish, such as I never saw elsewhere, which eats most deliciously and is by them called the *King of the Sea*. In fine, they have such plenty of several sorts of fish, and different ways of taking them unknown to us, that 'tis impossible to distinguish them; for, besides the lines abovementioned, they have all sorts of nets of cotton, twine, wheels and other instruments for fishing. Upon the flats near the shore they catch small fish like pilchards with casting nets.

"At the two equinoxes they have a general fishing, which is very remarkable. At these two periods of the year, as the tides flow beyond their wonted bounds, so they ebb more than usual and discover several rocks and flats, which at other times continue under water. Upon this occasion the Maldivians pitch upon several dry corners, which they encompass with stones raised like a wall to a great height, being forty paces in circumference, with a door or entrance left that is three paces wide. This done, thirty or forty of them stretch out, all round the flats, a large wide circle of the great cocoa cords at each fathom of which they tie a piece of cocoa shell dried, and that supplies the place of cork, making the line float. Now the fish inclosed within the circle are so scared with the shadow of the floating line as if it had a net underneath it, that instead of making their escape by swimming, they fly from it, and by the gradual contraction of the line are brought into the inclosure, the entry of which is thereupon stopped with all expedition with faggots of the boughs and leaves of cocoa compacted together of the bigness of a man; after all the sea runs out and leaves the fish on the dry land. This fishery, which continues fifteen days together, produces commonly ten or twelve thousand fish."‡

Crustacea.

Crustacea are widely represented, including most species of cray-fish from the larger *Palinuri*, and crabs—Painted, Hermits, Paddlers, Occypodes, &c.—in numbers sufficient to "cover whole islands."

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* "The quantity thus taken in a day by one boat sometimes amounts to 1,000" (Trans. Bom. Geo. Soc., 1876—8, p. 79); 600 or 700 is considered a fair take.

† See Note (3) on 'Fish-curing at the Máldives.' ‡ Pyrard, quoted in Harris, Vol. I., pp. 711, 712.

Mr. Allan Hume found the Lakkadives "a perfect paradise for crabs," none new, but in variety astounding. "There were massive built, sturdy, purple chocolate rascals (*Eriplia scrabicula* and *levimana*) that ensconced themselves in holes of rocks in which they fitted to such a nicety that it was most difficult to dislodge them. Small long-legged silvery fellows (*Occypode cordimana*) that scampered along the land at the rate of ten miles an hour, and just when you thought you had them, vanished into a hole. Then there were some strange enormous-clawed, cream-coloured, and grey-mottled, knobby fellows, grubbing about in shallow water (*Calappa tuberculata*) which, when they opened out their huge arms, seemed to be dividing their bodies into three parts. Then, under every stone we turned, were dumpy brownish-red individuals, with black tips to very stout claws (*Leptodius sanguineus*), the hardest biters of the lot. Hundreds of orange-red or Hermit crabs (*Cenobita Olivieri*) lurked under branches of all the low-growing littoral shrubs. Of course, the variegated *Grapsi* swarmed in myriads on every part of the reef, and on the coral blocks at the outermost face of the island."*

Mollusca.

Throughout these groups *Mollusca* abound in rich profusion. "The shallows were full of shells—huge massive Cones, enormous Tiger-claw shells (*Pteroceras lambis*) with their beautiful wide-spreading glossy pink lips: cowries of many species, amongst them some very large tiger shells (*Cypræa tigris*), deep-red King Conks (*Cassis rufa*), *Olives Cerithium, Murex, Mitra, Nassa, Natica, Nerita, Trochus, Volvorina.*"*

"The sea beach was strewed with large bunches of a delicate snow-white pointed coraline (*Isis hippuris*), that looked as if it would have formed an appropriate moss for the Arctic regions."

Cowries.

The small money cowry (M. *boli, Cypraea moneta*) is found in myriads at the Máldives.

Twice a month, when the tides suit, men and women wade into the sea waist deep and detach them from the stones under which they cling.† One man will sometimes gather as many as 12,000 in a day. The shells are then buried until all traces of putrefaction have disappeared; after which they are generally put up for the market in three-cornered bundles of cocoanut leaf-plat known as *kottas*, weighing 25 lbs. each.

Ambergris and Sea-cocoanut.

Two minor products, obtained by the Islanders from the sea, require notice. These are ambergris (M. *goma, mávaharu*), and the so-called 'sea-cocoanut' (M. *táva-kárhi, Lodoicea Seychellarum*)—rated at so high a value in the estimation of the Máldive Sultans as to be retained as part of their royalties.

Ambergris—the kind known to the natives of the continent and Ceylon as *mín* or 'fish' amber—was formerly found in large quantities, and occasionally exported.

The curious double-cocoanut, now proved to be confined to the Seychelles, but long believed to grow beneath the sea near these Islands, and hence called *Coco-de-mer* or *Coco des Maldives*, is rarely washed ashore at the present day.

Both these casual products have ever been held in the greatest request by natives throughout the East on account of their real, or supposed, valuable medicinal properties.‡

MANUFACTURES.

Manufactures.

The chief manufactures in which the Máldivians display much skill, and have attained considerable success, are those of coir, mats, and cloth.

Coir.

The coir (M. *rónu*) of these Islands, as that of the Lakkadives, has been noted for centuries for its light colour, fineness, and comparative strength, as contrasted with Ceylon and Indian coir, and fetches a much higher price in the market. The Portuguese drew most of the rope required for their fleets in Indian seas from the Máldives. The best quality is made in Tiladummatí Atol.

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* Stray Feathers, Vol. IV., pp. 435-6. "From our cruise we brought back over 100 species of univalves, of which at least 12 were new; and a still large number, I think, of bivalves."

† The practice of collecting cowries, by placing cocoanut boughs in the sea, as described in the Travels of the Two Muhammadans, and later by Barros (Asia, Dec. III., Liv. III., Cap. IV., p. 312), and Captain A. Hamilton, Account of the East Indies, 1727, (Pinkerton, Vol. 8, p. 389), would seem to be obsolete.

‡ Note (4).

THE MÁLDIVES.

PRODUCTIONS AND MANUFACTURES.

Mats.

The well-known Máldive mats [M. *tuḍu kuna*] are made only in Suvádiva (Huvadú) Atol, from a rush (M. *háu)* which thrives best there. In delicacy of pattern, in happy combination of the only three colours adopted—black, yellow-brown and white—and in permanency of dye, these fine mats surpass anything in the same line the world over, and have justly obtained unqualified commendation. The best quality are worked up on Gaddú Island, the ordinary mats at Havara-Tinadú, and a small kind on Gemaná-furhi.

Cloth.

Two or three qualities of cotton cloth are woven, chiefly in Máḷosmaḍulu (Eda-furhi island), Aḍḍú, and Suvádiva Atols, though occasionally made elsewhere for private use.

A peculiarity in this article consists in the uniform tasteful colouring of the waist and head cloths, sometimes plain red, or blue edged with red an inch wide, but more commonly of a rich chocolate colour relieved by a black stripe between two of white on either side, and finished at the ends by a narrow yellow silk border and a neat fringe.

The dyes employed are excellent, particularly the red and chocolate, which are extracted from a root (M. *ahi, Morinda citrifolia.)* The black dye is obtained by boiling gall-nuts and rusty iron together in cocoanut water.

The price of cloths of native manufacture is much higher than that of the various coloured ones imported from India, in consequence of the demand induced by all persons being expected on public occasions to wear the former.

The natives also spin a large quantity of foreign cotton. "The spinning-machine (M. *tatun)* is simply a large and small-wheel of light frame work."

Lacquer and fancy metal work.

In painting fancy articles, such as favourite boats, lances, wooden dishes (M. *kurandi),* axe-handles, &c., they have reached a degree of perfection both in brilliancy and gradation of colour and beauty of design, which it would be difficult to surpass, throwing in the shade the by no means contemptible efforts of the Kandyans in similar lacquer work. The best specimens are procurable at Tuládú in Máḷosmaḍulu Atol.

The art of working in metals, though still imperfectly understood, needs but developing.

As it is, ordinary Máldive waist-knives (M. *vali)* chastely inlaid with silver and mother-of-pearl, leave nothing to be desired in portability and serviceableness, whilst for shape and handsome finish the larger silver-mounted knife-dagger with ivory handle (M. *fiyohi,)* worn exclusively by grandees and soldiers, is unique.

Knife-handles are carved from *kuradi* wood, black coral (M. *endiri)* and whales' teeth (M. *boḍu-mas daï)*; and some small cleverly-designed betel boxes are fashioned in brass.

Jewellers (M. *aikan-kura míhun)* are now to be found on most Atols, but were formerly limited to two islands in Nilandu Atol—Ribudu and Huḷudali—whence they made their rounds periodically to the other Atols, taking their tools, &c., with them, and remaining at each island as long as they got employment.

Other artizans still follow this practice of visiting Atols "where there are no workmen in the same line."*

Scientific instruments.

Among ingenious—if to European notions crude and antiquated—instruments, constructed on scientific principles hardly to be expected of a people so cut off from the world, the quadrant (M. *digu-fila),* astrolabe (M. *ré-fila)* and bellows (M. *giruba),* merit special praise.

Architecture.

There is little, if any, attempt at ornamental architecture discoverable on the group. The Mosques, even at Málé, are poor, cadjan-roofed edifices; nor does the Sultan's palace redeem the general mediocrity.

Stone carving.

In the art of carving on stone, however, whether in intaglio or basso-relievo, the Máldivians exhibit skill of a high order. Nearly two centuries back the excellence of their chiselling called forth deserved eulogy. "At the island of Hammandou, which lies

* In Pyrard's time, "each different trade was confined to a distinct cluster of islands, as the weavers in one, the goldsmiths in another, the locksmiths, mat-makers, potters, turners, joiners, on other several clusters."—Pyrard, p. 86, quoted in Asiatic Annual Register, 1802.

in 7°," says Captain Alexander Hamilton, "I saw carving on some tombstones, as ingeniously cut with a variety of figures as ever I saw in Europe or Asia."*

PRODUCTIONS AND MANUFACTURES.

Máldive boats.

Máldive sailing boats are remarkably well-built. The trading vessels, indeed—*furedde* ('foreign') *oḍi*—100 to 200 tons burthen, which venture as far as Calcutta, "from their build and rig, are totally unfit to work to windward, or to make moderate progress, unless the wind is even abaft the beam;" but smaller trading boats [M. *baḍu* or *Oḷudú* and *daturu oḍi*] of about 50 tons are very fair sailers, with a fine entrance and good bearings; the smaller fishing boats [M. *mas oḍi*], in particular—often not exceeding 2½ to 3 tons burthen—have superior swift sailing qualities.

The boats are generally sewn together, but few nails being used, and have a single mast and square sail of matted work. "Small sails of cloth are occasionally set on a temporary light mast or hoisted on a shifting back-stay taken to the taffrail."†

From stern to stern these boats are built and equipped with materials furnished by the cocoanut palm, and not unfrequently provisioned and laden with products from the same tree.‡

"In going from island to island within the Atols the natives often use rafts [M. *kadufati*]."

NOTES.

Notes.

(1)

Flora of the Máldives.

FLORA OF THE MÁLDIVES.—No regular botanical exploration of these Islands has been, as far as is known, yet carried out. There is, however, every reason to believe that a close examination of the flora will prove it to be similar in nearly all respects to that of the Lakkadive group, already dealt with by the late Mr. Hall (Report, November, 1871)§, and casually by Mr. Allan Hume (Stray Feathers, Vol. IV., 1876).

Mr. Hume writes :—

"Two large shrubs are very abundant and are common to the shores of India, Ceylon, the Archipelago, Australia, and South Sea Islands. The one a *Scaevola* (*S. Konigii*, Vahl.) with masses of large glossy apple-green somewhat fleshy leaves surrounding irregular panicles of white flowers, the other, a great coarse wild heliotrope (*Tournefortia argentea*, L.) with an infinite number of close-set whorls of oval leaves, with an universal glaucous blue tint. Of course the sandy shores, as elsewhere in all tropical countries, were covered by the bright green-leaved, purplish-lilac flowered, trailing sand convolvulus (L. *Pes-capræ*), and inside this were everywhere huge patches of that remarkable rigid-leaved grass (*Spinifex squarrosus*) peculiar to the shores of India, which is often called the sea-pink [? M. *biliṇ hui*]; not that it is anything of the kind, but only that its densely crowded masses of stiff glaucous blue leaves remind one irresistibly at a short distance of a bed of pink plants after they have done flowering. A large sedge (*Cyperus arenarius*, Retz.) grew here and there in profusion, and masses of a beautiful white moon creeper (*Calonyction comospermum*, Bojer) were in places densely draped over clumps of the large bushes already mentioned, converting them into an impenetrable thicket. Everywhere the shore Quassia (*Suriana maritima*, L.), common on all tropical coasts, a stunted woody shrub, with multitudes of tiny leaves, occupied the external and most exposed positions.

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* Pinkerton, Vol. 8, p. 390. † Trans. Bom. Geo. Soc., 1836—8, p. 82.

‡ "Their hulls, masts, sails, rigging, anchors, cables, provisions, and firing are all from this useful tree. It also affords them oil for their kitchen and lamps, sugar and candied sweetmeats, and pretty strong cloth" —(Captain A. Hamilton, Pinkerton, Vol. 8, p. 388)—a statement almost literally true at this day.

"The Ambassador informed me that the same process adopted in Ceylon for propagating trees by annular incision obtained at the Maldives for increasing the bulk of cocoanut trees intended for boat-building purposes. Hence, perhaps, the superiority of their cocoanut wood for building vessels over that of Ceylon, which, unless it be over fifty years old at least, is scarcely fit for anything except fuel, fences and aqueducts."—(Bennett, Ceylon, &c., p. 353.)

§ Unfortunately not available in Ceylon.

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"The only other plants on the island [Bitra Par] were a sort of dandelion (*Microrhynchus sarmentosus*, D. C.), a miserable everlasting (*Achyranthes bidentata*, Blume) infamous for the reckless prodigality with which it expends its seed on all passing legs, another covered with a little white woolly caterpillar-like inflorescence (*Aerva lanata*, Juss.), and a tropically-universally diffused nyctago (*Boerhavia diffusa*, L.).

"This completes the scanty flora of the island—all plants of the commonest description and the widest distribution."

Of Cardamum (Kadamat) Island.—"The common southern milk plant (*Calotropis gigantea*) was noticed here for the first time [M. *ruva*]. There were also mallow-worts, the small trailing *Sida humilis*, (Müll), and the *Abutilon Indicum*, (G. Don); quantities of wild indigo—whole fields of it, if I may use the expression—only broken by patches of a scarlet-flowered ixora (*I. bandhuca*, Roxb.), large clumps of a broad-leaved shrub, not unlike the common dāk (*Butea frondosa*), for which I think previous visitors have mistaken it, but which is really *Guettarda speciosa*, L.

"A great part of the jungle is composed of a dwarf tree, a verbena (*Premna integrifolia*, L.) closely allied, though very different in appearance, to the gigantic Teak. A tall, fine, loose-flowering grass (*Apluda aristata*, L.) fills all the outskirts of the jungle. A few other insignificant herbs (*Wedelia biflora*, D. C., and *Euphorbia pilulifera*, L.), complete the list of wild plants which we first met with here, and to which have to be added almost all those found on Bitra-Par and Kiltan."

Amini resembles Málé in possessing a goodly number and variety of fruit trees. "Here there are some 700 bread-fruit trees, numbers of lime bushes, a good number of betel-nut palms, plantains and pomegranates. Castor-oil plants, papaya [M. *falo*] and horse-raddish [M. *muragá*] trees are common. I saw also several banyan, some tamarind, some aonla (*Embica officinalis*), and a number of poon [M. *duburi*] trees (*Calophyllum inophyllum*, L.), so valuable for masts and cross-pieces of small vessels, like those in use in these Islands. A good many vegetables are also grown here—yams, sweet-potatoes, arooees (*Collocasia antiquorum*) and others.

"With the comparatively large trade of this island, it is not surprising that many more wild plants are found here than in the other islands. We procured every species here that I have already enumerated (except the sedge found on Bitra-Par), and, besides, saw many plants of the Datura or Stramonium [M. *kaḷu oreni*], of the winter cherry (*Physalis Peruviana*, L.), of a large Cowitch with bunches of deep blackish-purple flowers (*Mucuna capitata*, W. and A.) looking like Hamburgh grapes, of the lovely blue-flowered creeper so common in Indian gardens—(*Clitorea ternatea*), of two yellow-blossomed Acanthads (*Barleria prionitis* L., and *ciliata*, Roxb.), and many other inconspicuous herbs, including the broad-leaved, jointed (*Panicum compositum*, L.), and common three-toed (*Dactyloclenium Ægyptiacum*, Weld) grass."

At Bingaroo the undergrowth was also very dense. "Enormous patches of a great sedge (*C. pallidus*, Heyne) common in Burmah, the Malay Peninsula, and Borneo, and now in full flower, were very conspicuous. We observed most of the plants already recorded, but they grow here with a luxuriance which contrasted strongly with the generally-stunted growth of the same species on Bitra-Par. The rosemary-like shore Quassia (*Suriana maritima*, L.) was here in great densely-packed bushes, dotted with small orange-yellow flowers. Interiorly the place was an almost impenetrable thicket, full of grass of many species not obtained elsewhere, *Panicum verticillatum*, L.—[*Cynodon dactylon*?]—a species of *Hemarthria*, *Morinda bracteata* (Roxb.), and others not in flower and not identifiable.

"Masses of *Cæsalpinia bonducella*, Flem., with its all-pervading sharp double recurved thorns, recalling the "Bide-a-wee" thickets of the Cape, in many places barred all progress."

To which should be added the following plants verified by Dr. King:—*Cleome viscosa*, L.; *Cardiospernum Halicacabum*, L.; *Crotolaria verucosa*, L.; *Vernonia cinerea*, Loss; [M. *valikofá*]; *Ageratum conyzoides*, L.; *Plumbago Zeylonica*, L.; *Tylophora asthmatica*, W. and A.; *Peristrophe bicalyculata*, Nees; *Rungia pectinata*, Nees; *Leucas aspera*, Spreng; *Euphorbia atolo*, Forst; *Phyllanthus Madraspatensis*, Müll; and from the Máldives, identified by Mr. W. Ferguson, F.L.S., *Gloriosa superba* [M. *vihala goḍi* or *vayula tári*]; *Cassia sophera* [M. *digu tiyára* or *téra*]; *C. auriculata* [M. *rana' ura*]; *Adenanthera pavonica*; and the 'four o'clock' *sendrikka*, *Mirabilis jalappa*. [M. *asaru má*].

(2)

The general nature and extent of Máldivian ornithology may be gathered from the list of birds—some five and thirty varieties in all—observed by Mr. Allan Hume during his cruise among the Lakkadives in 1874.—("Stray Feathers," Vol. 4, pp. 460-83.)

Birds.

English.	Classical.	Máldive.
The Common Peregrine ...	*Falco peregrinus*, Gmel. ...	—
The Kestrel ...	*Cerchneis alaudarius*, Briss. ...	—
	Cuncuma leucogaster, Gmel. ...	—
The Indian Parish Kite ...	*Milvus govinda*, Sykes. ...	—
The Black-winged Kite ...	*Elanus melanopterus*, Daud. ...	—
Indian Koil ...	*Eudynamis honorata*, L. ...	*Kaḷu kovili, Ḍiḍi kovili.*
The White-eyed Tit ...	*Zosterops palpebrosus*, Tem. ...	
The Common Crow ...	*Corvus splendens*, Vieill. ...	*Káḷu.*
Asiatic Golden Plover ...	*Charadrius fulvus*, Gmel. ...	—
The Large Sand Plover ...	*Ægialitis Geoffroyi*, Wagler. ...	—
The Mongolian Sand Plover...	*Ægialitis Mongolicus*, Pall. ...	—
The Kentish Plover ...	*Ægialitis Cantianus*, Lath. ...	—
The Turnstone ...	*Strepsilas interpres*, L. ...	*Rappa, ratafai.*
The Crab Plover ...	*Dromas ardeola*, Payk. ...	*Toravá.*
The Whimbrel ...	*Numenius pheopus*, L. ...	*Buḷitibu.*
The Eastern Curlew ...	*Numenius lineatus*, Cuv. ...	—
	Tringa crassirostris, Tem. and Schl...	—
The Sanderling ...	*Calidis arenaria*, L. ...	—
The Common Sand-piper ...	*Tringoïdes hypoleucos*, L. ...	*Iloḷi.*
The Green Shank ...	*Totanus canescens*, Gmel. ...	—
The Common Heron ...	*Ardea cinerea*, L. ...	*Má-kaná.*
The Blue Heron ...	*Demiegretta gularis*, Bosc. ...	—
The Indian Pond Heron ...	*Ardeola grayi*, Sykes ...	*Ráboli.*
The Green Bittern ...	*Butorides Javanicus*, Horsf. ...	—
	Sterna albigena, Licht. ...	—
	Sternula minuta, L. (? *S. Sinensis*, Gmel.) ...	*Kiri dúni, villa.* —
The Large Crested Tern ...	*Sterna Bergii*, Licht. ...	—
	Sterna Bengalensis, Less. ...	—
The Brown-winged (Panayan) Tern ...	*Sterna anosthætus*, Scop.. ...	—
The Sooty Tern ...	*Sterna fuliginosa*, Gmel. ...	*Vári, váli.*
The Common Noddy ...	*Anous stolidus*, L. ...	*Kaḷu dúni, máragá.*
	Phaeton ætherius, L. (? *P. Indicus*)	—
	Sula fiber, L. ...	—
The Yellow-eyed Gannet ...	*Sula piscatrix*, L. (? *S. Cyanops*) ...	*Kaḍu-heda.*

For the Máldives the following may be also added, provisionally.

The Common Stilt ...	*Himantopus candidus*, Bonnat. ...	*Kokkágoḷi.*
The Grey Plover ...	*Squatarola Helvetica*, L. ...	*Durhin.*
The Caspian Tern ...	*Sterna caspia*, Pall. ...	*Boḍu-gau-dúni.*
The Lesser Crested Tern ...	*Sterna media*, Horsf. ...	*Má-koḷalá.*
The Antartic Skua ...	*Stercorarius antarcticus*, Less. ...	*Kukulu-má-dúni.*
The Indian Whistling Teal ...	*Dendrocygna Javanica*, Horsf. ...	*Ranvan réra.*
The Common Teal ...	*Anas crecca*, L.	*Ilàfati réra.*
	Spatula clypeata, L. ...	*Kaḷu réra.*
The Large White Egret ...	*Herodius alba*, L. ...	*Langaná-dúni.*
The Little Egret ...	*Herodius garzetta*, L. ...	*Iruvá-hudu.*
The Common Night Heron ...	*Nycticorax griseus*, L. ...	*Kará-ráboli, kaḷu-ráboli.*
The Brown Gannet ...	*Sula leucogastra*, Bodd. ...	*Kanifuḷu, galahiri.*
The Lesser Frigate Bird ...	*Fregata minor*, L. ...	*Má-horá.*

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Systematic examination and description of the icthyology and conchology of this archipelago,—the widest and most promising branch of its zoology,—must be left to future investigators. For the present, a scanty list of sea fish and shells, identified with more or less certainty, is inserted, as of possible interest.

Fish.

English.	Classical.	Máldive.
White Shark ...	*Squalus carcharias*, L. ...	*Miyaru.*
Hammer-head Shark ...	*Squalus zygæna*, L. ...	*Budi miyaru.*
Elliot's Shark ...	*Carcharias Ellioti* ...	*Femunu.*
Saw-fish	*S. pristis*, L.	*Farutoḷi* (Chris).
Sword-fish	*Xiphias gladius*, L. ...	*Hibaru* (Chris).
	Histiophorus immaculatus ...	*Fan-hibaru.*
Scar fish	*Cybium guttatum*	*Toḷi.*
Bonito	*Scomber Pelamis*	*Kaḷu-bili-mas.*
Leopard mackerel ...	*Cybium interruptun* ...	*Kanneli.*
Dolphin	*Coryphaena hippurus*, L. ...	*Fiyala.*
Tamarind-fish ...	*Lates calcarifer*	*Faloḷu.*
Spotted Sea-Perch ...	*Serranus guttatus*	*? Kaḷu-boḍu.*
Block's Sea-Perch ...	*Priacanthus Blockii* ...	*Bereli.*
Humped Wrasse ...	*Cheilinus undulatus* ...	*Má-hibaḷu-mas.*
Russell's Parrot-Wrasse ...	*Pseudoscarus rivulatus* ...	*Oḷu-mas.*
Long-nosed Sea Beam ...	*Lothrinus rostratus* ...	*Failu.*
The Rangoo ...	*Lutianus* (g.)	*Ráveri, akerá.*
Coffer-fish	*Ostracion* (g.)	*Gon, gonu.*
Porcupine-fish ...	*Dioclon hystrix*	*Karikolu* (Chris).
Globe-fish ...	*Tetrodon* (g.)	*Fófi.*
Surgeon-fish ...	*Naseus unicornis*	*Tubá, tubi.*
Mangoe-fish ...	*Polynemus plebeius* ...	*Kéla-mas.*
Flying-fish	*Exocoetus evolans*	*Fulagi, huḷun-mahá.*
	Muraena (g.)	*Ven.*

Shells.

Classical.	Máldive.
Nautilus Pompilius, L. ...	*Nai-boli.*
Cassis, L.	*Feṇ-kakká-boli.*
Cassis cornutus, L.... ...	*Kuḍa-kokká-boli.*
Cassida rufa, L.	*Rabboli.*
Terebra maculata, L. ...	—
Conus aulicus, L.	—
C. Mallaccanus	—
C. betulinus, L.	—
Dolium perdrix	*Baḍu-kokká.*
Melo Indicus	*Kokká.*
Olivæ, (g.)	*Digu-boli.*
Turritella duplicata ...	*Fuheheri.*
Ampularia	*Finihuki.*
Neritina dubia	*Haduwarigolá.*
Cypræa reticulata, Martyn ...	
C. mauritiana, L.	*Boḍu-boli.*
C. lynx, L.	—
C. moneta, L.	—
C. talpa, L.	—
C. carneola, L.	—
C. caurica, L.	—
C. helvola, L.	—
C. interrupta, Gray ...	—
C. asellus	*Kafahi boli.*
Mazza rapa, (chank) ...	*Saṇgi.*

(3)

FISH-CURING AT THE MÁLDIVES.—The fish caught in the seas encircling the Atols of the Máldive archipelago are classed by the natives broadly into two chief kinds :—

1. *Faru mas.* This term includes what the Siṇhalese call රැළු මාළු, *gal máḷu*, and bears the same literal meaning, viz., 'rock fish'; such are the Siṇhalese *tambuwá, siláwá, koppará.*

But among the Máldivians *faru mas* would seem to comprehend also the larger kinds, such as 'saw fish' (M. *farutoḷi*), 'sword-fish' (M. *hibaru*), 'sear-fish' (M. *toḷi*, S. *tórá*) and 'sharks' (M. *miyaru*, S. *mórá.*) These fish are of a soft, oily nature, unadapted for curing, only edible when fresh, and never salted for the foreign market.*

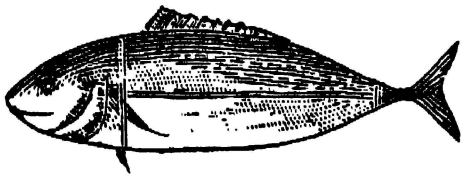
2. The real 'Máldive fish' (M. *kaḷu-bili-mas*,† vulgarly *komboli* or *kommala mas*, S. *umbala kaḍa*) of the Ceylon and Indian markets are chiefly *bonito* (S. *balayá*, *Scomber Pelamis*, L.) though two or three more species are similarly cured, *e.g.*, M. *goḍá* (? S. *ṇtawallá*), M. *kanneli* (? S. *kelawallá*), M. *rágoḍi* (S *rágoḍuwá.*) The flesh of these fish is tough, dark, and not very palatable, and—especially *kelawallá* and *balayá*—spoken of by the Siṇhalese as *giniyam*, 'heating.' At one season of the year a large number of these *balayó*, or bonitos, are caught off the south-west coast of this Island, and from the fishery the village of *Balapiṭiya* ('the hamlet of the *balayá*') on the sea-board, twenty-three miles north of Point-de-Galle, has derived its name.‡

The details of the *kaḷu-bili-mas* curing industry—the staple export of the Islands—are extremely simple.

After the fish are brought on shore a portion is sold whilst fresh, and the remainder treated as follows:—The entrails (M. *gohoru*, S. *boku*) and the lower part of the belly (M. *baḍu*, S. *baḍawata*) are extracted, the head and tail cut off and thrown away, the fish split up, and the spine bone removed. The two slices are then usually divided in one of two ways:—

(i.) If into two pieces (*i.e.*, four pieces in all) they are known generally as *Himiti-mas*, each individual piece as *gaḍu*, and all four together as *mahé* or *emmas* ('one fish').

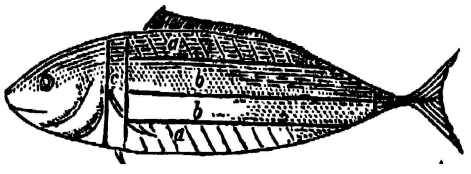
Fig. I.



This plan of cutting the bonito is said to have originated in the island of Himiti (Nilandu Atol), and is followed also by the Islanders of Koḷumaḍulu and Haddumatí Atols.

(ii.) If the two slices are divided into four strips with a transverse cut across the front of the fish, thus,—

Fig. II.



the pieces have separate names, and are valued differently—

a a the pieces along the back and belly, called *gaḍu mas* ;

b b those along the middle of the side, called *medu mas* ;

c that between the head and the ends of *a a b b*, called *kirá mas.*

Gaḍu mas, so called because they are supposed to be the best pieces§; *medu* (S. *meḍa*) *mas*, because they are from the centre ; *kirá mas*, because these pieces are weighed (M. *kiraṇ*, S. *kiranavá*,

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* Christopher, however, (J. R. A. S., Vol. VI.) has *faru mas* 'salted and dried fish.'

† See *Ind. Ant.*, Vol. VIII., p. 321, "Notes and Queries," where Mr. D. Ferguson, on the authority of Mudaliyár L. De Zoysa, would set old Pyrard right, by deriving '*cobily mash*' from the Siṇhalese *kębili* (pl. of *kębella*) 'pieces,' and *mas* 'fish.' *Kaḷu-bili* = *kaḷu* 'black', *bili* (S. *balayá*) 'bonito.'

‡ These seas are frequented by *Bonitoes* or good fishes, which are wholesome food, though the flesh is dry. They are of the same figure and bigness as carps, but somewhat thicker. They swim in shoals close together, and always follow the ships. These also devour a great quantity of flying-fish, which you find many times undigested in their bellies."—*A Collection of Voyages of the Dutch East-India Company*, translated into English (p. 132, London, 1703).

§ *Gaḍu*, *koḷu*, affixes employed when speaking of anything connected with the Sultan ; *e.g.*, *kaï-koḷu*, 'the State umbrella ;' *vedun-gaḍu*, the large sweatmeat presented annually to the Ceylon Governor. *V. s.*, p. 80.

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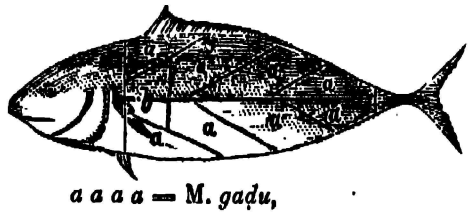
'to weigh')—not counted—in selling. This is the practice in Mulaku, Felidu, Ari, Mále, and, it is said, all Atols further north.

But in Huvadú and Fua Mulaku Island, and sometimes in Aḍḍú Atol, these fish are cut up, as in Fig III., and called by the name of the respective Atol or Island ;

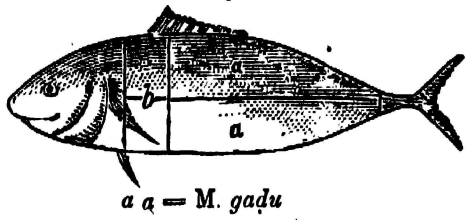
Fig. III.



a a a a = M. *gaḍu*,
b = M. *kirá* or *uguru*,

and in Aḍḍú Atol as shown in Fig IV.

Fig. IV.



a a = M. *gaḍu*
b = M. *kirá*.

The march of civilization has introduced modern weights (cwts. qrs. and lbs.) into the Máldives, but until recently the different pieces of Máldive fish had a relative value to one another. Thus :—4 pieces *medu mas* = 2 *gaḍu mas* (of the same fish); 8 *gaḍu mas* = 7 pieces *Himiti-mas*, —*kirá mas*, as above said, being valued against their weight of *gaḍu mas*, &c.

When the fish have been divided into the desired number of pieces, these are washed with salt water, then thrown into a caldron (or chatty) of boiling salt water and allowed to remain for a few minutes only, to prevent the flesh becoming too soft. It is said to be important that the water should be boiling from the first. On being taken out they are placed on the wattle loft or shelf (M. *mehi*, S. *męssa*) above the fire. There they are left three or four days till well blackened and dried, after which, if necessary, they are exposed to the sun to be finished.

Thus dried they are, as is well known, of the appearance and consistency of blocks of wood.

Fish-curing is carried on at the Máldives all the year round, but chiefly in the dry season from January to July. The same process obtains throughout the group, and it is worthy of note that it has remained unchanged since Pyrard's day (A.D. 1602—1607.) "The fish," says he, "which is caught in this manner, is called in their language by the general term '*cobolly masse*' because they are all *black*. They cook them in salt water, and then dry them by the fire on *clayes* so thoroughly that when dry they keep for a very long time. It is in this commodity they carry on so extensive a traffic, not only among themselves, but they even supply the rest of India, where this article is in great request." (p. 138). And again (p. 141): "The fish which are found on the banks or lagoons of the Atols are called in the Máldive language '*phare masse*' [M. *faru mas*,] that is to say, 'rock fish'; because '*phare*'* is a 'bank' or 'shelf of rock,' '*masse*' is 'fish.' The other kind which is caught in the high (open) sea is called, as I have already said, '*combolly masse*,' that is to say 'black fish.' It is in this that they have so large a trade, and with which they supply all the coasts of the Continent. It is cooked in salt water and dried, for it is not otherwise saltéd ; although sometimes they salt some of it, yet it remains always in the brine† until wanted. But it is not this that they export or send away. As there is no salt made at the Máldives, that of which they make use comes from the coast of Malabar, and it would not suffice for so large a quantity of fish as is daily caught for the supply of the inhabitants as well as for trade. For, in truth, I believe there is no place throughout India, nor elsewhere, where the fishery is richer and more plentiful."

Two and-a-half centuries earlier Ibn Batúta (A.D. 1344) also wrote of this fishery :—"The food of the natives consists of a fish like the *lyroûn*, which they call *koulb al mâs*. Its flesh is red ; it has no grease, but its smell resembles that of mutton. When caught at the fishery, each

* S. *para*. in පරපර, *galpara* 'reef.'

† *I.e.*, "the fish blood" and "salt fish" occasionally imported into Ceylon, called by the Máldivians *rhi-kahuru* (lit. 'fish sugar'.) This consists of the broth in which the bonito has been boiled, to which old scraps are added from time to time, the whole after two or three days being again boiled down to a gelatinous syrup containing more solid lumps.

fish is cut up into four pieces, and then slightly cooked. It is then placed in baskets of coco leaves and suspended in the smoke. It is eaten when perfectly dry. From this country it is exported to India, China, and Yaman. It is called *koulb al más.*" (Gray, quoting *Voyages d'Ibn Batoutah*, Tome IV., 112).

(4)

AMBERGRIS.—"After having been long doubted, scientific opinion seems to have come back to the opinion that ambergris is an excretion from the whale. 'Ambergris is a morbid secretion in the intestines of the cachalot, deriving its origin either from the stomach or biliary ducts; and allied in its nature to gall-stones, ... whilst the masses found floating on the sea are those that have been voided by the whale, or liberated from the dead animal by the process of putrefaction. (Bennett, "Whaling Voyage Round the Globe," 1840, II., 326)."*

"It has a fragrant and peculiar odour when heated or rubbed; and when good it is solid, opaque, of a bright grey colour, which is darkest externally, and intermixed with yellow or reddish streaks. It is used in perfumery chiefly. *Localities:* Madagascar, Surinam, Java, Zanzibár, and the Arabian Gulf." †

The true origin of this substance much exercised the minds of older writers.

Arab travellers seem to have considered it a plant, or mushroom, produced at the bottom of the sea, whence it was detached and washed ashore by the violence of the waves. (Travels of the Two Muhammadans.) "The best ambergris," says Mas'udi, "is found on the islands and coasts of the Sea of Zinj (Eastern Africa); it is round, of a pale blue, and sometimes as big as an ostrich egg..... These are morsels which have been swallowed by the fish called *Awál.*"*

Barbosa, notes of the Máldives:—"There is also a large quantity of ambergris *(ambre)* in great pieces, part of which is white, another grey, and a third black;" adding that the "Moors" considered it to be the dung of the sea-birds *(esterquo dauves)* which throng the reefs, and that the white kind *(ponambar)*, was held the most valuable, the grey next, and last the black-coloured *(minambar)*, which was swallowed and afterwards vomited by whales.‡

"As for ambergrise," wrote Tavernier as late as 1670, "there is no person in the world that knows either what it is, or where, or how it is produc'd. But the fairest probability is, that it must be only in the Eastern sea: though some parcels have been found upon the coast of England and in some other parts of Europe. The greatest quantity is found upon the coast of Melinda, especially in the mouths of a river call'd Rio de Sena. The Governor of Mozambique gets in the three years of his Government above 300,000 *pardos* of ambergrise, every *pardo* containing 27 *sous* of our money."§

Kaempfer devoted a special section in the Appendix to his "History of Japan"‖ to 'some observations concerning ambergrease.' "Authors differ widely in their opinions, concerning both its origin and production, nor do they so much as agree, what kind of substance it properly is. Some take it to be a bituminous substance, others a sort of earth or clay, others a sea-sponge, others an excrement of the whale, others the dung of the birds. Many more could be mentioned, if I did not avoid being tedious. * * * * It is found chiefly in the intestines of a whale, which is caught frequently upon the Japanese coasts, and is by the natives called *Fiakfiro*, that is, 'the hundred-fathom fish,' because of the length of its intestines, which is suppos'd to equal that number of fathoms. It is found, as I observ'd, in the intestines of this whale, mix'd with chalky limy excrements, almost as hard as stone, and it is from the hardness of these excrements they conjecture, upon dissecting, whether or no they are like to meet with ambergrease. The natives have given a very despicable name to this precious commodity, a name, however, becoming the meanness of its origin for they call it *Kusurano-fu*, that is, 'the excrement of whales.'¶ The ambergrease, as it is torn off by the waves from the bottom of the sea and thrown upon the coasts, before it is swallowed by the whales, is a deform'd, flat, slimy substance, and withal of a very disagreeable, ungrateful smell. People that find it thus floating on the surface of the water, or lying upon the coasts, take several small pieces, squeeze and press them close together into the

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* Yule, Marco Polo, Vol. II., 342. † Faulkner, Dictionary of Commercial Terms, Bombay, 1856.

‡ Noticias para a Historia et Geographia das Nações Ultramarinas, Tom. II., p. 352.

§ Tavernier's "Travels in the East Indies" (English translation, 1678, London), Bk. II., Pt. II., p. 152.

‖ Kaempfer's "History of Japan" (English translation by J. G. Schenchzar, London, 1726.) Vol. I., pp. 111-112; II., Appendix pp. 46-51.

¶ Compare M. *goma* = ? S. ගොම, *góma*, 'cow-dung.'

THE MÁLDIVES.

PRODUCTIONS AND MANUFACTURES.

Notes.

form of a round ball, which, as it grows dry, becomes also more solid and weighty. Others mix and knead it with meal or flour of rice-husks, by which means they not only increase the quantity, but heighten and better the colour. However, the ambergrease thus adulterated is easily known, for if you take any quantity and burn it there will remain a coal, proportionable to the quantity of the stuff mixed with it. It is observ'd, besides, that the worms get quickly into this spurious sort of ambergrease. Others adulterate it by mixing it with a certain powder'd rosin of a very agreeable scent, but this cheat also is easily discover'd, for upon burning a piece of it, the mixture of rosin will evidently appear by the very colour, smell and quality of the smoke. The Chinese have another way of trying whether it be genuine; it will dissolve and diffuse equally, which the adulterated sort doth not. The natives use it no otherwise but as an ingredient of other well scented spices, in order, as they say, to fix their volatile smell. In the main they value it but little, and 'tis owing entirely to the Dutch and Chinese, who would buy it up at any rate, that they have now learnt to prize it. And yet everybody is at liberty to take it up where he finds it and to sell it as his own property."*

Large pieces are occasionally obtained. Tavernier mentions two which weighed respectively 33 lbs. and 42 lbs.; but Kaempfer knew of a lump found in Japan seas weighing upwards of 100 cattis, or 130 lbs. Dutch weight, and of a yet larger tortoise-shaped piece (to be seen at Amsterdam), that the King of Tidor sold to the Dutch East India Company in 1693 for 11,000 Rix-dollars, or about £2,000. It weighed 185 lbs. (Dutch).

SEA-COCOANUT.—"There is also a kind of nut, occasionally washed on shore, which is as large as a man's head, and like two huge melons joined together. They [the Máldivians] call it *Tauarcarré* [*táva-kárhi*], and believe that it is produced by trees growing beneath the sea. The Portuguese named it *Cocos des Maldives*: it is of great use in pharmacy and fetches a high price."†

"This fruit being uncommon, its form particular, and its origin unknown, all contributed to assign to it extraordinary properties and to give rise to fable concerning its existence ..... The tree which produces the Sea Coco, rising in many parts of the isle upon the borders of the sea, the greatest part of the fruit falls into the water; where floating it is carried by the wind and currents to the Maldivian Isles, the only part of the world where this fruit had been found before the discovery of the Isle of Praslin [Seychelles], from whence the Europeans called this coco 'the Maldivian Coco,' and the Maldivians *Travacarné*, that is, 'treasure.' It was afterwards called 'Solomon's Coco,' to give it a name corresponding to the marvellous, which was annexed to its origin. The tree being unknown that produced it, it was believed to be the produce of a plant that grew at the bottom of the sea, which came off when it was ripe, and by its lightness floated on the waves. There was nothing wanting to complete the fable but to ascribe very great and extraordinary virtues to this fruit, and this was done accordingly. It was given out, and believed, and is still believed, not only in the Indies, but through all Asia, that the almond of the Sea Coco has all the properties which we attribute to *Theriaca Mithridate*, and which perhaps we exaggerate; (viz.,) that its outward covering is a certain antidote to all kinds of poison.‡ The grandees of Indostan still purchase this fruit at a very high price: they make cups and shell, which they adorn with gold and diamonds; and never drink out of any other, being persuaded that poison, which they are much afraid of because they often employ it themselves against others, let it be ever so active, cannot hurt them if their liquor is but purified in these salutary goblets. The king of the Maldivian Isles avails himself of this general error. His predecessors assumed, and he reserves to himself, the exclusive right to a fruit, which being carried upon waves, and driven ashore by the wind, ought to belong to whoever picks it up, but the Sea Coco, when it shall be found not to be so rare and extraordinary a production, will doubtless soon lose its value and virtues, and the Maldivian Monarch the tribute, which has been paid him by ignorance and error.§

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* Not so at the Máldives, where it was a criminal offence for private individuals to appropriate ambergris. Car il appartient au Roy, et nul n'oseroit, le retenir qu' il n' eust le poing couppé. (Pyrard, p. 163.)

† Pyrard, p. 163.

‡ Faria-y-Sousa (English edn. Vol. I., p. 229) says it is "a greater antidote against poison than bezoar stone." "Here [Colombo, in 1777] is seen likewise a *Borassus* or Sea-Cocoa brought from the Maldive Islands, which had been set in earth, had grown up, and was now in the third year of its growth, having only three leaves. The nut had lain eight months in the ground before it put forth the first leaf. ..... They take of it [the kernel] half or even a whole drachm. It is deemed a sovereign remedy against the flux, epilepsy, and apoplexy. The inhabitants of the Maldives call it *Tavarcare*."—Thumberg, "Travels," 3rd ed. Vol. IV., pp. 133, 159. "So much as 4,000 florins were offered by the Emperor Rodolf II. for a single specimen."—Tennent, quoting Malte Brun, Vol. IV., p. 240.

§ Sonnerat's "Voyage to the Spice Islands" (English translation, pp. 2-6, London, 1781.) A description of the tree and fruit follows. Tennent (Vol. II., p. 126.) refers to Sir W. Hooker's full account in the Botanical Magazine. Vol. XII.

VII.—TRADE AND COMMERCE.

Early trade.

The early export trade of the Máldives consisted in cowries, coir, cocoanuts, and ambergris, and as regards the first two commodities had become so considerable by the 11th century as to warrant traders of the day dividing the group into 'Cowry Islands' *(Dyvah-houzah)*, and 'Coir Islands' *(Dyvah-kanbar)*.*

14th century.

By the 14th century dried fish and cloth were included amongst the exports.

"Ships export from the Islands the fish of which I have spoken, cocoanuts, fabrics, the *ouiliyân*, [M. *féliya*] and turbans: these last are of cotton. They export also vessels of copper which are very common there, cowries, and *kanbar;* such is the name of the fibre which envelopes the cocoanut. The natives make it undergo a preparation in pits dug near the shore: then they beat it with picks, after which the women work it into rope. They make of it cord for joining the boards of their ships, and such cordage is exported to China, India and Yemen; *Kanbar* rope is worth more than hemp: with this cord the (boards of) ships are joined in India and Yemen; for the Indian sea is full of rocks, and if a ship joined with iron bolts strikes a rock it is broken up, but when it is fastened with this cord it has elasticity, and does not break."†

16th century.

On their appearance in the East the Portuguese found the Máldives visited by trading and pilgrim vessels, passing to and fro between Arabia and the Persian Gulf, and the Malabar coast, Bengal and China. "Moor" merchants virtually ruled the Islands from Cannanore, exacting tribute of coir and other produce from the native King, and employing resident sub-agents, who rented the public duties and were invested by the King with administrative powers in order to enable them to levy their taxes.‡

The Portuguese writers enumerate minutely the productions of the group, and dwell on the brisk exchange carried on there for silver, rice, salt and earthenware which the Islanders needed.§ The native-made cloth of silk and gold—an industry, if not quite extinct, long since reduced to a minimum—was in special request.

Máldive coir had the chief attraction for the Portuguese; nor were they slow to force the then powerful "Moor" Mamale into an annual payment of coir rope for the privilege of an exclusive monopoly of Máldive trade as against all other natives of India. A conflicting contract with the Máldive Sovereign followed‖; and both alike were soon shamelessly violated through the malversation of Portuguese agents *(feitors)*, and favourites of the Viceroys at Goa permitted to harry the Islanders by private descents, made nominally on behalf of the King of Portugal.¶

Finally, later in the same century, the terms of the treaty of peace at the conclusion of the protracted war, (based on the lines of those with every native Prince once overpowered), gave the Portuguese, besides an annual tribute, the exclusive right of trade with the Máldives, and the consequent control over the price of their produce and manufactures.**

As Portuguese influence waned, the foreign traffic of the Islands expanded with increased vigour—the result of reaction—developing into no mean proportions.

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* *V. s.*, p. 24.

† Gray, quoting *Voyages d' Ibn Bat.*, Tome IV., 120.

‡ Barbosa (*Collecçao* &c., Tom. II., 352); Barros, Dec. III., Lib. III., Cap. vii. As late as A.D. 1589 the Christian ex-King of the Máldives complained to the Portuguese Sovereign that the "Moors" of Cannanore were absolute masters of the Islands, and appropriated the produce *(se queixa que os Mouros de Cananor são sinhores absolutos da quellas Ilhas, e as defructam de tudo o que ellas dão)*—Archivo Portuguez Oriental, Fasc. III. Pt. I., 211, (King to D. Duarte de Meneses, Viceroy, dated 22nd February, 1589), Goa, 1861.

§ Correa, *Lendas*, Tom., I. 341—2; Barros, Barbosa, *loc cit.*

‖ *V. s.*, p. 27.

¶ Correa, *Lendas*, Tom, II., 132. The converted Máldive Sultan, Don Manuel, seems himself to have issued at Cochin "Letters Patent" to various Portuguese adventurers for one or more voyages to the Islands.—See Archivo Portuguez Oriental, Fasc. V., Pt. I., 455-6, for the record of such a privilege granted to Manoel Silveira d' Araujo, as *Capitão mor*, in A.D. 1560.

** *V. s.*, p. 29; See Pyrard, Pt. II., p. 131.

THE MÁLDIVES.

TRADE AND COMMERCE.

17th century. Pyrard's description.

The 17th century was, so to speak, the heyday of Máldive trade. Pyrard saw it at its height, and more than a hundred years later, during the reign of the prudent Sultan Ibráhím Iskandar, it showed but faint signs of decay.

"Commerce at the Máldives," wrote Pyrard in A.D. 1611, "is extensive, and they are much frequented for purposes of trade. From all quarters may be seen there merchants—from Malabar, Barcelor, Onor, Bacalor, Cananor, Calecut, Tananor, Cochin, Coilam, Caël, Guzerat, Cambaye, Surat, and from Chaul; Arabs, Persians, natives of Bengal, St. Thomé, Masulipatam, Ceylon and Sumatra, who bring the commodities which are valued and in demand there, and take away those products in which the Máldives are so rich. First of all, the cocoanut tree, which grows wild, from which are derived many articles held in request by foreigners; to wit, the cordage with which all the vessels of the Indies are rigged; then the cocoanut, which is exported in such quantity to Arabia, the Malabar coast, and all parts of India, that every year more than 100 vessels are loaded with it, as well as with the oil and the honey [jaggery] of the same tree, and its platted leaves [cadjan] of which they make sails. But the greatest traffic is in [coir] rope."*

"They vend also little shells, that contain a creature in them of the bigness of the end of one's little finger, white, very smooth and glittering. * * * * These go only to Bengal, the inhabitants of which esteem them so much that I have seen thirty or forty ships laden without any other commodity bound thither; though in Bengal they have [gold and silver and] enough of other metals, yet these shells pass there as money, and the King and noblemen hoard up prodigious quantities of them, accounting them their treasure. They give twenty measures *(coquetées)* of rice for a fardel [*koṭṭa*] of shells, each fardel containing 12,000.

"They have besides these a sort of tortoise-shell called *cambe* [*kahabu*] which is black and smooth and has many natural figures. It is found nowhere but there and in the Philippines, and goes off best in Cambaye. Here they also make fine reed-mats and cloths of cotton and silk. In exchange the merchants export some cotton and silk cloths, a sort of [toilet] oil, [arecanut, for chewing with betel leaves], iron, steel, pieces of porcelain, and in short, all the necessaries of life; yet everything is cheap, because of the number and frequency of ships. They import all their gold and silver, which they never send out again, but lay it up among their wives' jewels as their chief treasure."†

17th and 18th centuries.

During the 17th and 18th centuries a considerable trade in dried-fish, cocoanuts, cowries and coir continued to be carried on, both with the foreign vessels that visited Málé, and by the Islanders themselves in the course of annual voyages to Indian and Ceylon ports in their native craft.

The Dutch, with but a precarious hold on Ceylon and still engaged in the struggle with the Portuguese for supremacy in the East, yet assayed even in A.D. 1640 the unknown Máldive trade, mindful as ever of their commercial interests.‡

Hitherto, and until the demand for cowries induced by the Dutch rendered the export of these shells to Ceylon profitable, Máldive boats visiting the Islands loaded up mainly with dried-fish and cocoanuts. Captain Hamilton§ and Abbé Raynal‖ assert that Achin (Sumatra) vessels purchased this "*comelamash*" fish largely for gold dust and benzoin, the latter being exchanged by the Islanders for coffee at Mocha. The price in the former's time was as high as £8 per thousand.

By the Dutch the general products of the Máldives were held beneath notice, nor were restrictions placed on their free sale¶; but they were not slow to gauge the advantage of a complete control over the traffic in cowries. This monopoly they attempted, with fair success, to establish throughout the latter part of the 17th and much of last century.

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* Pyrard, p. 165.

† Pyrard, quoted in Harris Vol. I., p. 715.

‡ *V. s.*, p. 30.

§ Pinkerton, Vol. 85, p. 389.

‖ History of the Settlements and Trade of the Europeans in the East and West Indies (Justamond's Translation, Vol. 2, p. 83).

¶ Cf. Dutch Records, Miscellaneous (Diary, October 25th, 1663).

Some details of the course of this trade during the Dutch period of rule in Ceylon may be supplied.

Governor Ryckloff Van Goens, in his Memoir* of A.D. 1663, commends to his successor as remunerative the business to be done in Máldive cowries "and sometimes large quantities of ambergris."

Trade in cowries with the Dutch, A.D. 1669. A.D. 1688.

The annual supply of cowries brought over by native vessels being at times insufficient to meet the home requirements, the Dutch not unfrequently sent over their own vessels to Málé to negotiate. As early as 1669 the "Cocatoe" was despatched, and brought back 1,149 *koṭṭas* (27,576 lbs.). The price then ruling was 1⅛ rds. the *koṭṭa*. In 1688 it was 6¼ larins, and the Dutch were anxious to establish an exclusive contract with the Sultan. Governor Laurens Van Pyl wrote:—"The Company is very glad the Sultan has always entertained friendly feelings towards them; as regards the commercial relation, however, between the Company and the Sultan there is room for an agreement to be entered into."†

Fortunately for the Islanders no such contract seems to have been ever concluded.

Upon each successive Governor was constantly impressed from Batavia the duty of inciting the Máldivians to larger supplies of cowries *(den Maldiver in den aanbreng van cauris meer en meer te animeeren)*, whilst the purchase price was stringently fixed at much below the fair market value.

As a kind of set off, however, against the low rate at which cowries were taken over, and also with the object of inducing larger importations year by year, the Máldivians were permitted to purchase a certain quantity of arecanuts upon favourable terms, as compared with other vendees, though much above cost price. Thus in 1687 the Máldive Ambassador was allowed 15 *amuṇams* of arecanuts at 6⅓ rds. the *amuṇam;* in 1704 the price was reduced to 5⅓ rds.; and by 1740 to 5 rds.

A.D. 1697.

The state of the trade with the Islands at the close of the 17th century is described by Governor Thomas Van Rhee:—"For some years Máldive vessels have arrived here (Colombo) and at Galle with dried-fish (*comblemass*) and now and then with cowries. These small shells we have purchased from them, in settlement of the home demand, for 1½ rds. the *koṭṭa* of 12,000, or 24 lbs. In exchange they take arecanuts and spices of small value, paying for Colombo and Galle arecanuts 6⅓ rds., and for those of Calpentyn (Kalpiṭiya) 5 rds. the *amuṇam* of 24,000. To encourage them to bring over larger quantities we are earnestly recommended to court their good will *(Haer Edelen Achtbear tot Batavia ons ook seer ernstig recommandeeren de Maldives vaerdaers in alles te carresseeren)*"‡

18th century. A.D. 1700-1720.

The price of cowries, which had been raised from 1⅓ rds. to 2 rds. the *koṭṭa*, or 5 stuivers per lb. (1703), remained the same till 1718, but was insufficient to induce the Máldivians to face the risks of the sea in transporting them to Ceylon; for in 1721 Governor Rumpf remonstrated with the Sultan that in spite of the higher price offered by the Dutch in Ceylon, French ships brought away large quantities of cowries from the Islands purchased at 1½ rds. the *koṭṭa*. At this time the Netherlands demand was 20,000 *koṭṭas*, or 480,000 lbs.

The period between 1720 and 1750§ was, perhaps, marked by the briskest trade between the Dutch and the Islands. To prevent the cowry trade falling into the hands of other nations, special vessels laden with spices and grain were despatched to Málé, sometimes annually.

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* *Memorie voor den E. Heere Jacob Hustaert, Raad Ext. van India, &c.*, dated Colombo, December 26th, 1663.—Valentyn, *Oud en Nieuw Oost Indien*, 1724-6., p. 183.

† Letter to S. Muhammad, dated December 4th, 1688.

‡ Memoir for his successor, Gerrit de Heere, dated Colombo, February 25th, 1697.

§ "The Island of Male, according to the latest accounts we have, is in a better condition than ever, and the Dutch carry on there a very considerable commerce, the natives themselves also trading in their own vessels to Ceylon, where they are well used by the Dutch, and make a very great profit of those little shells which are called *cauris, coris*, and by our seamen *cowries*."—Harris, "Collection of Voyages," 1744, Vol. I., p. 715. Other European nations usually procured them from the Dutch to be employed in slave traffic on the Guinea coast.

THE MÁLDIVES.

TRADE AND COMMERCE.

A.D. 1720-1750.

A.D. 1723.

In 1723 the vessels 'Adam' and 'Africa' visited Málé, freighted with 70 lasts (1312 maunds) of rice, besides spices, under instructions to bring back from 8,000 to 10,000 *koṭṭas* of cowries. Vessels were despatched again in 1727, 1728, 1732 and 1734.

"The wholesome dread" of the Dutch would seem to have made a ready market for their goods at any cost. The Sultan's letter of 1723 (in Portuguese) states that owing to the sickness of the crew the captain transacted no business, but that the Sultan had exempted the Dutch vessels from the payment of the usual port dues, and ordered his people to take the goods at the price demanded, viz.:—

1 *amuṇam* arecanuts, for 3½ *koṭṭas* cowries.

1 candy rice { 8 Bengal maunds / 4 parras = 1 maund } for 4½ *koṭṭas*.

2 lbs. cloves for 2 *koṭṭas*.

2 lbs. nutmeg for 2 *koṭṭas*.

36½ lbs. sugar for 1 *koṭṭa*.

A.D. 1734.

Again in 1734 the Sultan writes:—"As for the merchandize, I have taken it to the best of my power, and the captain has taken back the rest. The pepper I bought from the company I have sold to the captain of an English brig at a loss of 8 *koṭṭas* of cowries on each candy. Ships from Bellapor and Bengal arriving with supplies wait till August or September: if they cannot sell they take back their goods, or sell on credit till the ensuing year; but I have paid in full for all the goods brought by the Dutch ships, and, as there were no cowries to be had from the Islands (owing to the late inundation), was forced to borrow the requisite quantity from various merchants.*"

These ventures were not altogether successful. Thus from one trip of the 'Colombo' the Batavia Government complained that no more than *f* 2,970 (about £14) profit resulted, and that on the 10 lasts of rice shipped no gain was made owing to foreign competition.†

Renewed efforts—apparently fruitless—were made to inveigle the Sultan into a firm contract for exclusive trade with the Dutch Company *(een vast contract om met dien Sultan handel te dryven met seclusive van alle ander natien)*.

It is probable that the Dutch continued to send over their own vessels to the Islands occasionally during the latter half of this century, but not to the extent they had done in the reign of Sultan Ibráhím, who displayed much tact in simulating peculiar attachment to the Dutch while steadily encouraging trade with other nations.

A.D. 1740.

"The Máldive boats," Governor Van Imhoff writes in 1740, "import cowries, which also form an article of our trade. It is not a profitable business, but also not expensive; and, therefore, even as ballast, cowries are worth sending home. I have fixed the price this year at 2½ rds. the *koṭṭa* of 24 lbs. All that the Máldive Sultan asks in return is to have 50 *amuṇams* of arecanuts at 5 rds. per *amuṇam* without paying export duties. This I have granted; and he has shown his gratitude by sending us a larger quantity of cowries this year than the last. The annual demand from home is 400,000 lbs. weight, and we must therefore encourage the Máldive merchants to give us exclusively all they can find. This quantity would sell for *f* 100,000 (£8,300), but yet if we can send home Madura cloths the vessels need not be filled up with casks of these shells, which yield so disproportionate a profit."‡

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* Sultan's letter in Portuguese, dated May 9th, 1734.

† Possibly defeated by the very outrageousness of the fixed profit required on the several commodities offered for sale at the Islands. The following is the outward manifest of the 'Elisabeth' in 1727:—

	Purchase price.	Sale price.
100 lbs. mace, per lb.	*f* 0 11 3 ...	*f* 8 0 0
100 „ nutmeg „	0 1 8 ...	3 12 0
100 „ cloves „	0 6 11 ...	5 0 0
6,000 „ cast-lead „	0 2 6 ...	0 4 3
6,000 „ peper, per *bhar* (480 lbs.)	48 0 0 ...	121 10 0
200 *amuṇams*, Colombo arecanuts, per *amuṇam* ...	8 6 2 ...	17 5 0
10 lasts (750 *parras*) rice, per *parra*	1 0 6 ...	1 10 9
and Rds. 2,000, cash.		

‡ Memoir, left for the in-coming Governor, W. M. Bruininck, dated March 12, 1740.—Lee's "Ribeyro," Appen., p. 175.

TRADE AND COMMERCE.

In 1752 each return vessel to the Netherlands was expected to take 500,000 lbs. (2,000 *koṭṭas.*)*

The following year permission was received from Batavia to purchase cowries at 1½ rds. instead of 1 rd. the *koṭṭa*, to which price they had gradually fallen.† A.D. 1752-53.

The annual home demand slackened (1764-66) to 150,000, 200,000, or 300,000 lbs. (6,000 to 12,000 *koṭṭas*), if needed to fill the lower tier of vessels as ballast. In 1773 it remained the same. Meanwhile the price was raised (1767) from *f* 3·12 (72 st. = 6*s.* 6*d.*) to *f* 4·5 (85 st. = 7*s.* 7*d.*) or even *f* 4·10 (90 st. = 8*s.* 2*d.*) the *koṭṭa.* A.D. 1764-73.

In 1769, Governor Falck refused to accede to the Sultan's request to raise the price to 2 rds. per *koṭṭa* on the ground that the Company did not make so much profit on the trade as formerly.‡

A few years later the Dutch were effectually 'hoist with their own petard.'

The Sultan apologised in 1777 for his inability to supply cowries as usual, because the Ceylon price remained so low, whereas English and French vessels purchased them at the Máldives for Rs. 4 the *koṭṭa.*§ In spite of the counter assertion by the Governor that the Batavia and Netherlands Government had made it a fast rule that no change should be endured except in the last necessity (which did not exist), the Dutch thought it desirable the next year (1778) to make a reluctant concession of 5 stuivers (*i.e.*, from 85 to 90) on the *koṭṭa*,—and this when 12,000 *koṭṭas* (900,000 lbs.) were selling at Amsterdam for 7½ stuivers the lb., or more than 100 per cent. over cost price!‖ A.D. 1777-8.

How rapidly the price advanced, now that foreigners had regularly entered the market, is proved by the fact that in 1795 the Sultan sent over to Ceylon a vessel laden with cowries to be paid for at the stipulated price of Rs. 3 a *koṭṭa.*¶ A.D. 1795.

The above sketch will suffice to show that the Dutch, with everything originally in their favour, from the illiberality which characterized their commercial policy, saw a trade that, judiciously fostered, would have continued to yield them ample profits, gradually slip through their hands to the enrichment of other nations. Suicidal policy of the Dutch.

MODERN TRADE, A.D. 1830-80.

The whole of the export and import trade of the Islands is conducted at Málé, whither the produce of each Atol is brought to be exchanged for that of other groups.

The port charges and duties are moderate, and levied in a very simple manner. A port due [M. *haqu-langa*] of Rs. 40 is payable by every trading vessel, without reference to the period of her stay. The only customs duty is a 10 per-cent. charge on rice. Certain presents (M. *hadiyá*), however—sometimes amounting to Rs. 200 in value—are required to be made to the Sultan and officers of Government. Customs regulations and dues at Málé.

Christopher has specified the port regulations and charges in force in 1835, and there is reason to believe these have varied but slightly since. "From a large ship one candy weight of merchandize is exacted in addition to what is demanded for a small brig. The traders do not, however, take advantage of this custom, because they say a large ship would not be able to barter her cargo within the season, and that consequently her profits would scarcely cover the expenses of such delay.

"The *hadiya* is distributed as follows:—To the Sultan, one candy and one hundred and thirty-three bamboos of rice (equal to five bags and a-half), and seven red handkerchiefs, which are carried to his house at seven different periods. After the handkerchiefs

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* First reckoned by the lb. in 1744, upon instructions from Batavia. The *koṭṭa* was also made to equal 25 lbs. about this time.

† Cauris de Maldivo; tegens ander half rd 't cotty, en niet hoger, t' accepteeren.—(D. R. Misc.)

‡ Reply, dated January 26th, 1769, to Sultan's letter of October 27th, 1768. Note (1).

§ Sultan's letter, dated October 15th, 1777. Colombo letters, February 9th, 1778, and December 19th, 1778. Abbé Raynal states that foreign vessels annually took away cargoes of cowries, valued at 7,000 or 8,000 *livres*, purchased at 6 *sous* and sold from 12 to 18 *sous* per lb. in their several capitals, and 35 *livres* in Guinea.

‖ Wilcocke's Stavorinus, Vol. I., p. 352, note. ¶ Sultan's letter, dated July 13, 1795.

THE MALDIVES.

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are thus delivered one is returned to the lascars who carried them, to which is added a quantity of betel. To the officers of Government, the Sultan's relatives, &c., according to a list which is provided by the Hindeggeree, eleven candies and fifty-three bamboos, making a total of fifty bags of rice.

"The above presents may be made either in rice, salt, cummin-seed, chillies, coriander seed, which are taken by measure; or in dates, catechu, turmeric, and onions, which are taken by weight; six gull [*gau*], or one and a-half pound, of the latter being considered equal to six bamboos, or twelve seers, of the former.

"The Emir-el-Bahr is the officer whose duty it is to superintend the division and distribution of the presents: for his trouble he is entitled to a sixth part of everything given, which constitutes the principal emolument of his office.

"The presents are sent in small quantities on wooden platters carried by the lascars, who are required to sing as they go to the different houses. The traders can so arrange as to select for presents the articles in least demand in the market. This privilege, and the inferior quality of the articles, render the duties very light. Besides the presents above-mentioned, forty cotton handkerchiefs are required to be given when they are delivered, the cheapest of any color being taken without objection. There is a small present of Rs. 5 in a handkerchief required to be sent to the Sultan, after the other presents are delivered, to obtain permission to barter.

"There is another exaction of a different nature to which traders are subject according to the established custom of the place. They are liable on a requisition to supply the public stores with a certain quantity of rice, at a price fixed by the Hindeggeree, which is about half the market value. The trader is always paid for such rice in *kotas* of cowries, a *kota* consisting of 12,000, and valued at Rs. 2 each, though they can be purchased in the bazaar for Rs. 1; but this is made up by the charges for godown rent and anchorage being received by the Hindeggeree in *kotas* at his own valuation. If this be not attended to and the charges be paid in cash by the trader, he sustains considerable loss.

"On the arrival of a vessel from the eastward near any of the Attols a boat immediately puts off to her. The pilot receives a fixed and handsome remuneration from the Hindeggeree, as does also the headman of the Attol to which the pilot-boat belongs. On a vessel anchoring off the town of Malé, the Emir-el-Bahr approaches her in a boat, and hailing the pilot inquires whether there is any sickness on board. Should there be none, he goes on board, when he is generally presented with a piece of chintz or a shawl, and he then takes the master of the vessel on shore. If there be small-pox on board the vessel is put under the strictest quarantine for forty days after the recovery of the person last effected. In case the disease was prevalent at the place from which the vessel has come, though there be no sickness, quarantine is nevertheless enforced, but the period under such circumstances is regulated as the Sultan may see fit to order."*

Boutiques and godowns—generally outside the Fort wall—are rented to the traders (mostly "Moormen," with, of late years, a few Parsis) who barter their goods in them. The rent charged is from Rs. 20 to Rs. 50 a month. "Should all the public buildings be occupied, temporary thatched huts are put up as required."†

External trade.

The external trade from Málé consists of two branches, one carried on by foreign traders, either themselves resorting to that place from Chittagong, Ceylon, and the Malabar Coast, or by means of resident agents on the Island, and the other by the natives in their own vessels.

The foreign traders call regularly, generally arriving about March and leaving with the South-West monsoon in July or August. "The part of the external trade which is conducted by the natives themselves is carried on chiefly with Calcutta, [Madras and Ceylon,] in boats of from 100 to 200 tons burthen, which leave for the coast late in August or early in September, annually, having the South-West monsoon in their favour, and return in December and January with the North-East monsoon." The boats which visit Ceylon rarely exceed 50 to 60 tons.

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* Trans. Bom. Geo. Soc., 1836-8, p. 85. † Note (2).

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"Unfaltering in their adherence to their ancestral pursuits, the commodities which the Islanders produce at the present day consist of precisely the same articles which they exported a thousand years ago."* These exports are fish (dried and salted), fish-blood, cocoanuts, coir-yarn, cowries, tortoise-shell, and sometimes a few mats and sweetmeats. In return they take back grain (chiefly rice,) arecanuts, curry-stuffs, spices, earthenware, provisions, sugar, tobacco, cotton and silk (raw and manufactured,) some timber, and a variety of sundries.

Progress of trade.

The progress of the commerce of the Máldive Islands since 1841 is indicated in the annexed tables (A., B., C.,)† and is the more satisfactory as completely refuting the prevalent notion that it has for years been in a state of decline.

The following table exhibits the average annual value for quinquennial periods of the trade with British India and Ceylon :—

TRADE.

Years.	British India.			Ceylon.			British India & Ceylon.		
	Imports.	Exports.	Total Trade.	Imports.	Exports.	Total Trade.	Imports.	Exports.	Total Trade.
	£	£	£	£	£	£	£	£	£
1836 to 1840 ...	21,157	9,469	30,626	—	—	—	—	—	—
1841—1845 ...	18,509	—	—	—	—	—	—	—	—
1846—1850 ...	19,644	—	—	—	—	—	—	—	—
1851—1855 ...	17,928	11,597	29,525	—	—	—	—	—	—
1856—1860 ...	15,776	13,953	29,729	26,118	4,854	30,972	41,894	18,807	60,701
1861—1865 ...	23,504	22,805	46,309	33,648	7,273	40,921	57,152	30,078	87,230
1866—1870 ...	39,146	35,034	74,180	32,974	6,078	39,052	72,120	41,112	113,232
1871—1875 ...	47,580	33,328	80,908	38,750	17,940	56,690	86,330	51,268	137,598
1876—1880 ...	23,187	34,302	57,488	35,160	30,493	65,652	58,347	64,794	123,121

British India.

Whilst between 1830 and 1840 the annual trade with British India averaged £30,626, it had more than doubled in the corresponding period thirty years later (1866-1870), and amounted to £74,180. In the following period of five years it had further increased to £80,908 ; but has sunk considerably since.

Ceylon.

With Ceylon the trade has advanced with faster strides. Between 1856-1860 the combined import and export trade averaged £30,972 yearly, or less than half of the annual amount reached between 1876 and 1880, viz., £65,652.

Total trade.

The total imports into, and exports from, British India and Ceylon rose from £60,701 (1856-1860) to £137,598 (1871-1875), or two and-a-quarter fold, though they fell to £123,121 in the next five years.

The united commerce with British India and Ceylon for 1880 amounted to an aggregate of £123,562, of which £57,300 were imports and £66,262 exports.

The course of the external trade of the Islands is clearly shown in the accompanying **Diagram.** The progressive improvement during decennial periods has been steady in spite of curious fluctuations difficult to explain.

Of the whole trade with British India and Ceylon, the latter is able to claim as much as 44 per cent.—a larger proportion than might fairly be expected.

Bengal absorbs three-fourths of the Indian trade, the whole of which may be said to lie between that and the Madras Presidency, as Máldive boats of late years have rarely visited Burmese ports or Bombay.

In order to further illustrate the description of Máldive external trade, statements (B., C.,) are appended showing the value of the chief articles imported into, and exported from, British India and Ceylon since 1853.

* Tennent, Ceylon, Vol. II., p. 175.

† The review of Máldive trade extends to 1880 only. Figures for 1881 have been added to the tables subsequently.

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Cocoanuts.

IMPORTS.*

Cocoanuts (M. *kárhi.*) The high estimate set on Máldive cocoanuts renders their sale very profitable. In 1853 the value of nuts imported into British India was £8,668, which had trebled by 1864 (£24,691), and in 1872 amounted to £46,241. The annual average value during the six years 1870-75 equalled as much as £30,403, but only reached £17,041 for the last five (1876-80).

Ceylon, with her home supply, naturally takes but a small quantity. The average for the past twenty years (1861-1880) has been only £103. The largest importation—valued at £651—was in 1871.

The wholesale price of cocoanuts at Málé is about 3,000 for one candy (4 bags) rice, or 1,000 for Rs. 7 to Rs. 8. In Ceylon these nuts sell at Rs. 8 to Rs. 10 per 1,000.

A small quantity of Máldive *copperah* is in some years imported into Ceylon.

Coir.

Coir (M. *rónu.*) Máldive and Lakkadive coir has always borne a higher market value than that of the Continent or Ceylon owing to its being not only stronger but of finer quality and better colour. That of Tiladummatí is estimated at 30 per cent. above the coir of other Atols.

In Ibn Batúta's time, and during the Portuguese period, as stated above, coir formed the chief article of export, and throughout last century large quantities continued to be annually brought over to Ceylon to be exchanged for arecanuts.†

The average yearly value imported into India was £7,812 between 1870-1875, but only £3,130 for 1876-80.

The importation into Ceylon shows an extraordinary increase. In 1859 the value was £544; in ten years it had about doubled (£1,027), and in 1879 amounted to £3,997, so that in twenty years the trade has increased more than seven-fold. The average value for the last five years (1876-1880) has been £3,091.

Fifty years ago coir yarn of the first quality exchanged at the Máldives at the rate of 20 lbs. for 12 lbs. rice, or against dates weight for weight, equivalent to Rs. 3 per maund (82 lbs.) Purchased in cash at Rs. 18 per candy, it sold at Calcutta from Rs. 25 to Rs. 30. The present price in Ceylon varies from Rs. 5 to Rs. 15 per cwt.

Cowries.

Cowries (M. *boli.*) The trade in these small shells has steadily declined since last century, and is almost certain to dwindle year by year as civilization advances.

The ultimate destination of the large shipments of the money cowry *(Cypraea moneta)* was, and to some extent is still, the Guinea coast of Africa. They were formerly much used in the slave trade, though even a century and a half ago a cargo of slaves could not be purchased for less than 12 to 14 tons of cowries.‡

In 1820 nearly 6,000 cowries could be purchased for Rs. 1 §; twelve years later the price in England was £20 per ton, and £50 to £60 on the coast of Guinea‖; in 1835 at Málé it was Rs. 2 the *kotta* (12,000)¶; at the present day it has fallen to Rs. 1·50, or Rs. 5 the cwt. About 1843 in India the exchange was 64 for one pice—which will now purchase 200 to 400—or about 5,000 for Rs. 1.** Some twenty years ago a temporary rise in price is said to have occurred owing to a sudden home demand, and vessels visiting Málé paid as high as Rs. 6 the *kotta*††.

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* Note (3).

† Abbé Raynal, *loc. cit.*, Vol. II., p. 83. The Dutch exported yearly 800,000 lbs. Ceylon-made coir-rope to Batavia and the Cape, besides 400,000 lbs. in yarn to Batavia, paying the natives a fixed sum—3½ fanams per bundle of 24 lbs.—and levying a heavy export duty. (Bertolacci, Ceylon, p. 178.) In 1816-17 Máldive coir sold in Ceylon from Rs. 11 to Rs. 14 per maund; Island-made at Rs. 6½ to Rs. 8. (Asiatic Annual Register).

‡ Harris, Voyages, Vol. I., p. 716.

‖ Journ. R. Geo. Soc., 1832, p. 83.

** Bennett, Ceylon, &c., p. 351.

§ Princep's Indian Antiquities (Thomas' edn.).

¶ Trans. Bom. Geo. Soc., 1836-8, p. 85.

†† The present dulness of the market is borne out by the following recent Produce Market Report (Brookes and Faith's, London, Nov. 19th, 1880):—"Cowries, Maldive, small, 15*s.* to 18*s.* per ton; medium, 10*s.* to 12*s.*; large, 6*s.* Very dull. Bombay large common Maldive, 8*s.* to 10*s.* per cwt.; medium Calcutta, 20*s.*" The trade in the *Cassis rufa* for cameos (Tennent, Ceylon, Vol. II., p. 175) has equally declined.

The chief trade is with British India direct: the Ceylon supply is merely warehoused temporarily to be reshipped to Bengal.

If the returns are reliable as showing the actual value of cowries annually imported (which may reasonably be doubted), the rise and fall is remarkable. The annual value absorbed by British India between 1853 and 1855 averaged only £568, but rose in 1856 to £2,008.

The same year Ceylon is credited with £15,905 worth; but in ten years the value imported had fallen as low as £89. Between 1870 and 1875 the trade appears to have been brisker, the importation into British India reaching £6,774 in 1870 and averaging for the five years 1871–75 £3,590, as compared with £2,049 during the same period into Ceylon.

Dried-fish.

Dried-fish (M. *kalu-bili-mas*) forms by far the largest article of export, amounting during the last twenty years to more than 73 per cent. of the total value of imports into Ceylon from the Máldives. It is noticeable that of the whole supply of fish required by Ceylon nearly one-third is drawn from these Islands.

About forty or fifty years ago the quantity shipped from the Máldives rose in some years to 75 lacs (1824), though in others it fell as low as 10 lacs. At Galle and Sumatra the demand was greatest. Chittagong traders exchanged most of their fish for pepper, which they carried to Bengal, generally making a profit of 300 to 400 per cent. on the speculation. A lac of fish, which cost something less than Rs. 2,000 at Málé, sold at Sumatra for 2,000 Spanish dollars.*

The wholesale barter rate for dried fish at the Máldives is at the present day 1 candy rice for 2¼ cwt. A few years back, before the system of modern weights was introduced, the same quantity of rice exchanged for 400 fish (*i.e.*, 1,600 pieces.) In Ceylon the price runs from Rs. 12 to Rs. 20 the cwt., according to the several sorts.†

From the returns it will be seen that the value of fish imported into Ceylon exceeded £20,000 by 1862, and attained its maximum in 1876 (£35,548.) The annual average since 1856 has amounted to £23,337 and has remained very steady during periods of five years:—

			£
Between	1856–60	it equalled	12,634
	1861–65	"	22,075
	1866–70	"	23,819
	1871–75	"	29,932
	1876–80	"	28,223

Fish-blood.

For the value of *fish-blood* (M. *rhi-hakuru*, 'fish-sugar'), as distinct from dried fish imported into Ceylon, the returns give figures only from 1856-1869, showing an average of nearly £100 annually.

Tortoise shell.

Tortoise-shell (M. *kahabu.*) In Pyrard's day the trade was chiefly with Cambaye: a *qau* (¼lb.) could be purchased for one *larin.* Máldive tortoise-shell is considered of first-class quality. Ceylon and Bengal are the markets for it.

Five maunds (lbs. 420) were exported from Málé in one season (1835). The Ceylon returns show that the trade is steady. In 1856 the value imported was £1,157, fell to £630 in 1862, rose to £1,510 in 1865, but fell again in the next two years to £992, after which it progressively improved till 1875, when it amounted to £2,184. The last five years, however, show an average of only £1,146. The annual average since 1856 has been £1,296.

Tortoise-shell purchased at Málé for Rs. 16 to Rs. 25 per cwt. realizes in Ceylon as much as Rs. 5 to Rs. 10 per lb. It is in great demand at Colombo and Galle for the manufacture of native combs and ornaments.

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* Trans. Bom. Geo. Soc., 1836-8, pp. 83, 106.

† Dried fish per cwt.: *godu-mas*, Rs. 20; *gadu-mas*, Rs. 20; *Himiti-mas*, Rs. 19; *medu-mas*, Rs. 18; *kirá-mas*, Rs. 12 to Rs. 15; fish-blood, Rs. 12 to Rs. 20 per lb.; salt-fish, Rs. 20 to Rs. 25 per 100.

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The only other exports worth particular mention are *mats, jaggery, confectionery* and *grain.*

Mats.

Mats seldom make good the price expected, and are frequently taken back in hope of a better market another season. The large mats of best quality are valued at Rs. 5 or Rs. 6 each at Málé, and can rarely be procured under Rs. 8 to 10 in Ceylon.

Jaggery.

The value imported since 1856 has only averaged £74, whilst that of *jaggery* has been less.

Confectionery.

The figures under the head *confectionery and provisions* are so large as to leave no doubt of their being exports from India and Ceylon returned, as in the case of *grain*, for want of a market. Máldive confectionery is limited to *boṇdialuva* (M. *boḍi*), *koliappam*, and a few other sweetmeats mostly consumed on the Atols. Taking the figures as they stand, whilst £1,258 worth of confectionery was imported into British India in 1853, the value amounted to £2,304 in 1872, and averaged £1,912 annually between 1871 and 1875, but fell off (1876-80) to £531 only. A much smaller quantity is taken by Ceylon, the average for the last 20 years (1861-80) being only £533.

Grain.

The large quantity of *grain* returned from the Máldives every year—the whole of which must have been shipped thither from India and Ceylon—is so far satisfactory as going to prove that the Máldivians are never threatened by impending famine, which on occasions afflicts the more Northern Islanders, the Lakkadivians, calling for special Government aid.

The import of superfluous grain has necessarily fluctuated with the requirements of the market at the Máldives. In 1859 grain to the value of £15,135 was imported, but the next year it fell to £34. The re-importation in 1867 amounted to £16,939. Less grain has been returned of late years. The average for the last five years (1876-1880) was £906, whereas that for the five years previous (1871-1875) equalled £2,112. The annual average since 1856 has been £3,997.

Sundries.

Among *miscellaneous articles* occasionally brought over from the Máldives it is not surprising to find *wreck goods.* Besides £30 wreckage, £57 worth of *wine* and *spirits* appear among the imports in 1859; two years later (1861) wreck goods to the value of £137 were sent over; in 1863 £116, and the following year £53 worth. *Brass* and *copper*—chiefly old cooking utensils—may also be found almost annually among the minor sundry imports to Ceylon.

EXPORTS.

Arecanuts.

Arecanuts form an annual and large proportion of the exports to the Máldives. As but few areca trees grow on the Islands, a very high value is set on these nuts for masticatory purposes, either raw or in the preparation known as *cutch.* The special indulgence as regards the purchase of arecanuts granted to Máldivians by the Dutch has been mentioned (*V.s.*, p. 99.) Nearly the whole quantity required by the Islanders is supplied by Ceylon. The value of arecanuts exported from this Island has averaged £1,323 since 1856, exceeding £2,000 in 1856, 1872, 1876, 1879 and 1880, but falling to £842 in 1869.

The wholesale price of best arecanuts in Ceylon is Rs. 30 per *amuṇam* of 24,000, weighing about 2½ cwt. At the Máldives 1 cwt. exchanges for ¾ cwt. of dried fish: a few years back 1 *amuṇam* was valued at 500 fish (*i.e.*, 2,000 pieces).

Cotton and Silk goods.

Cotton manufactures.—The value in 1853 of Indian cotton goods exported was only £895; rose three-and-half fold in 1855 (£2,921); fell to £1,085 in 1862, but suddenly rose again the following year to £3,517—a considerably higher value than the annual average attained between 1870 and 1875 (£1,809), though close to that of 1876-80 (£3,087).

Cotton goods exported from Ceylon have shown a steady annual value since 1871, viz., £4,299, as against £2,362 for the ten years previous (1861-70.) In three years only (1857, 1859 and 1869) has the value fallen short of £1,000.

Whereas the total value of cotton manufactures exported from British India and Ceylon in 1856 was £3,462, in 1863 it had increased to £5,203, and by 1876 to £10,359.

If the purchasing of cotton goods be taken as a test of the prosperity of a people, it may safely be said that the Máldive Islanders are considerably better off now than they were twenty years ago.

Some *silk goods* are also yearly purchased from British India, averaging between 1870 and 1875 £565 worth.

Grain.

Grain.—The returns furnish interesting facts regarding this, the staple export to the Islands. With increasing population, the amount required for consumption has rapidly advanced. This is made clear by the following statement. The value of grain annually exported from British India direct averaged—

Bewteen	1834–1841	(8 years)	£ 7,124
	*1853–1862	(do.)	9,401
	1870–1874	(5 years)	21,245
	1875–1879	(do.)	20,614

so that in 40 years it has nearly trebled. No doubt quantities, if obtainable, would be a fairer test, as the market price of grain has doubled during the last quarter of this century.

The average value shipped from Ceylon annually during successive quinquennial periods exhibits extraordinary increase :—

1856–1860	...	£ 1,186
1861–1865	...	1,690
1866–1870	...	1,327
1871–1875	...	9,794
1876–1880	...	20,479

or a growth of over 17-fold in the last twenty-five years.

The expansion of the grain trade has probably in the main been due to the enterprize of the few Parsí merchants, who have, during the last ten years, established regular commercial relations with the Islands.

Practically, the whole supply of grain is drawn from Bengal. Rice purchased at False-Point (Calcutta) for Rs. 4 to Rs. 5 per bag (2 maunds) is either shipped to the Máldives direct or brought to Ceylon and retained under bond for profitable reshipment.

It is believed (not without reason) that between 40,000 and 50,000 bags of rice are now carried over to the Islands yearly.

Curry stuffs, spices, earthenware.

The exports of *curry stuffs* and *spices*, as well as *earthenware*, from Ceylon, though comparatively small, have been progressively improving during the last twenty years, the annual average of the former between 1861 and 1870 being £172, as against £278 for 1871–1880, (from British India £258), and of the latter £309, against £626.

Merchandize.

Merchandize exported amounted in 1874 to £1,337, and in 1879 to £1,893. Under this vague term are included a large variety of sundry articles of insufficient value to be classed under their respective heads.

Provisions, and Sugar.

Provisions and oilmanstores.—The average value exported from India between 1871 and 1880 was £2,246, and from Ceylon £234.

Sugar.—The exportation from India for the same ten years averaged £1,784 (£3,072 in 1872), or more than five-fold that from Ceylon, viz., £322.

Tobacco.

Tobacco, snuff, &c., exported from India between 1871 and 1880 is valued at £1,352 annually, as compared with £338 from Ceylon. The yearly value taken from Ceylon has fluctuated considerably. It rose from £87 worth in 1856 to £822 in 1861, had fallen to £15 in 1866, rose the following year to £323, dropped to £1 in 1870, sprang as high as £1,015 in 1874, but has sunk somewhat since.

Among other articles shipped to the Islands the chief are *haberdashery* (£634 worth from India, 1879) *gunnies* (£1,000 from India, 1861), *furniture, timber, mats, medicines, oils*, and *terrajaponica*, or *cutch*. Of these the only two calling for remark are *furniture*

* Returns for 1842-1852, 1857, 1860, not available.

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and *timber* (annually shipped) as proving the dearth of serviceable wood on the Islands already noticed (*V. s.*, p. 84).

Sundries.

Miscellaneous exports.—In addition to the above a variety of sundries are exported every year. Among the commonest are *ghee, glassware, grind-stones, perfumery* and *soap*, with *bricks* (40,000—£57 value—in 1867), *carts and carriages*—probably hand-carts —(12—value £12—in 1879), *gunpowder* (never exceeding £5 value), and even such luxuries as *sodawater, lemonade*, and *biscuits*. The taste for the last item is evidently growing, for £12 worth were purchased in 1876, £46 in 1877, and £40 in 1879.

As intelligent navigators, Máldivians appreciate *scientific instruments, charts, &c.;* and that their children are not forgotten, *crackers* (£19, in 1874, and in 1878) and *toys* will testify.

Live-stock.

Live stock is little needed.* Two *horses*, valued at £50, were shipped from Ceylon in 1862 (of which one was returned four years later†) and two head of *cattle*, valued at £12, in 1871.

Specie and precious stones.

Where barter still rules in business transactions it is to be expected that *specie* would be rarely imported. In two years only, viz., 1862 (£2,000) and 1868 (£400) does it figure in the Ceylon returns. *Precious stones*, too, seem to have little attraction for these Islanders, as £1,506 worth have sufficed them during the last 24 years (£1,306 value, 1860; £200, 1878).

SHIPPING.†

Shipping.

It is curious that the growth of the external commerce of the Máldives has not necessitated the employment of an increased amount of shipping. This will be seen from the following return of average annual tonnage. Apparently the limit has been reached—for native vessels at least; and any increase in tonnage under the lifeless administration which has been suffered to exist for centuries must depend upon the larger use of foreign vessels in the trade.

TONNAGE.

YEAR.	BRITISH INDIA.			CEYLON.			BRITISH INDIA and CEYLON.		
	In-wards.	Out-wards.	Total.	In-wards.	Out-wards.	Total.	In-wards.	Out-wards.	Total.
1801—1810 ...	4,535	3,932	8,467	...	...	...	...	...	...
1811—1820 ...	4,762	4,729	9,491	...	...	...	...	...	...
1821—1830 ...	3,311	3,611	6,922	...	...	...	...	...	...
1831—1840 ...	...	...	...	...	...	...	...	...	...
1841 -1850 ...	3,806	5,404	9,210	...	...	...	...	...	...
1851—1860 ...	2,707‡	3,685‡	6,572‡	4,145	3,819§	7,964§	...	...	...
1861—1870 ...	3,944‡	4,504‡	8,448‡	5,377	4,035	9,412	9,321‡	8,539‡	17,860‡
1871—1880 ...	3,391	4,718	8,109	6,377	4,376	10,753	9,768	9,094	18,862

In 1841 87 vessels, of a total capacity of 5,259 tons, entered inwards and cleared outwards at British India ports, and 70 vessels, carrying 7,349 tons, in 1880, so that there has been virtually no advance during 40 years. If the figures are correct, some very exceptional cause must have brought about the extraordinary abnormal rise for one year (1845) to 345 vessels from an average of 104 since 1841, and, on the tonnage, 1½-fold the aggregate tonnage for the four previous years. Between 1868 and 1874 the British India returns are swelled by the addition of Lakkadive (including Minakaï) vessels.

* *V. s.*, p. 84.

† See tabular statements, D., E.

‡ For 9 years only: no returns for 1853 and 1867.

§ For 6 years only, viz., 1855–1860.

The shipping to and from Ceylon Ports shows some improvement since 1855. One hundred and eleven vessels, of 8,529 total tonnage capacity, entered and cleared out in 1856, against 131 vessels, amounting to 12,928 registered tonnage, during last year (1880).

On a rough average, the number of Máldivian craft which annually visit Ceylon is about 22, of 1,380 total tons burthen, manned by 440 sailors, or 20 men to each vessel of 63 tons.

Of the total shipping inwards and outwards (classed in the Ceylon returns as "British" and "Foreign"), Máldive vessels claim a percentage of 45, though the proportion of tonnage is but 15 per cent. The largest number of Máldivian vessels entered Ceylon ports in 1875 (31, tons 3415) and 1876 (40, tons 3167); the fewest in the two following years, viz., in 1877 (6, tons 534) and 1878 (1, tons 65).

The generally slight fluctuations in the annual tonnage of the shipping may best be seen by reference to the **Diagram.**

NOTES.

Notes.

(1)

The following letter from Sultan M. 'Izz-ud-dín—in French so villainous that a copy had to be made—with reference to the visit of the Dutch vessel "Triton," Capt. Blume, in 1769, affords an instance of the high-handed action of European nations at that period in their commercial dealings with native Princes:—

Au gouvemeur de Coulombe
Pour le roi des Maldives

"J'ay Recu avec plaisir La lettre que vous mavée ecrit par le Senault* Capt^ne Blüme J'ay fait tous seque Jay pū pour satisfaire le Dit Capit^ne etant anoncée de votre [part] ayant pris les Marchandise au pris quil me L'est a fait: Je compte Envoyer quelqu'uns de mes Bateaux J'esperre que vous les Recoverez comme le tems passée. Vous scavez que nous Commercions depuis longtems et esperé que vous me constinurée votre amitiée Le Capit^ne n'a pas paiyée Les usages nous avons Laisséo sa à sa Disposition: s'il Rien† Lan prochain nous esperrons qu'il nous sastisfera Le Roy vous fait toute sorte D'amitiée.

"le 3me Juin 1769.

"Raportée vous en á seque le Captne Blüme vous Dira. Seque Je n'est que par Complesance.'

Translation.

"To the Governor of Colombo.

For the King of the Máldives."

"I HAVE had the pleasure of receiving the letter which You wrote to me by Captain Blume. I have done all that I could to satisfy the said Captain, accredited as he was from You, having bought the merchandise at the price at which he set them to Me. I intend to send some of My ships, (and) I hope that You will receive them as in time past. You know that We (have) traded together for a long time, and (I) hope that You will continue Your friendliness to Me. The Captain has not paid the dues: We have left that to his settlement. If he comes back next year, We hope that he will satisfy Us. The King sends You every kind of friendship.

"The 3rd June, 1769."

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* *Senault = ? Senhor.* † *Rien* for *revient.*

THE MÁLDIVES.

TRADE AND COMMERCE.

Notes.

"Satisfy yourself as to that which Captain Blume will tell you. What I (? have done) is merely out of good will."

It seems that not content with driving a hard bargain, Captain Blume further forgot to pay the Customs duties!

(2)

The following is a list of approximate retail prices ruling at Málé a few years back for the chief bazár articles* :—

Arecanuts	12 for 1 cocoanut.
Cocoanuts	90 for Rs. 1.
Coir	1 *bodi* for 8 fanams, or 6 *náli* rice, or 600 arecanuts.
Corriander-seed ...	1 *láhi* (¼ *náliya*) for 1 dried-fish (4 pieces).
Chillies	1 *gau* (¼ lb.) for 1 fish.
Eggs	24 for 1 *náliya* rice.
Fish (fresh, large) ...	1 for 8 *kuḍa lári*.
Do. (salt)	1 *adubá* for 8 fish.
Flour	1 *gau* for 4 fish.
Ghee	1 *náliya* for 30 fish.
Jaggery	1 *adubá* for 8 fish.
Oil (cocoanut) ...	1 *náliya* for 24 fish.
Pepper	1 *láhi* for 4 fish.
Plantains	2 for 1 fish.
Potatoes	1 *gau* for 1 fish.
Do. (sweet) ...	do. for half a fish (2 pieces).
Rice	1 *náliya* for 3 fish or 8 *kuḍa lári*.
Saffron	1 *gau* for 1 fish.
Salt	1 *náliya* for 1½ fish (6 pieces).
Sugar	1 *gau* for 1 fish, or 1 *kuḍa lári*.
Do.-candy	do. for 1½ fish.
Tea	do. for 8 fish.
Tobacco	do. for 2 fish, or 8 *kuḍa lári*.
Tortoise-shell ...	do. for 12 *náliya* rice.
Vinegar	1 *adubá* for 3 fish.
Chatties (M. *boḍu fufé*), S. *muṭṭiya*)	1 for 8 fish.
Do. (M. *etiri*, S. *ṭiliya*) ...	1 for 2 fish.
Cloth (white)	4 *riya* (2 *gazu*, 'yards') for 8 fish.
Do. (*mundu*) ...	1 for 24 fish.
Do. (*rumá*) ...	do.
Do. (*féliya*)	do.
Do. (*libás*)	1 for 32 fish.

(3)

A comparative table of duties levied in India and Ceylon upon the chief articles exported to, and imported from, the Máldive Islands is given below.

It is astonishing how insignificant a proportion of the Customs revenue of this Island is drawn from the Máldives. The total value of the duty derived from the goods imported into Ceylon reached Rs. 5,624,401 between 1856 and 1879, of which the Máldive Islands contributed only Rs. 36,318, or a yearly average of Rs. 1,513 against Rs. 234,350. Again, whereas the total Customs collection of export duty between 1858 and 1869 amounted to Rs. 576,741, or Rs. 48,062 annually, that recovered upon goods exported to the Máldives was but Rs. 389, or an average of Rs. 32 for each year!

In port dues, between 1855 and 1879 Máldive vessels yielded an aggregate of Rs. 5,558, or Rs. 2,815 for vessels entered inwards, and Rs. 2,743 for those which cleared outwards.

* In Pyrard's time necessaries of life were far cheaper: for a *larin*, or 8 *sous*, could be purchased 400 cocoanuts, 500 plantains, a dozen fowls, 100 large fish, or 300 cwt. of roots.—Pyrard, p. 88.

COMPARATIVE STATEMENT of CUSTOMS TARIFF.

Articles.	British India.				Ceylon.			
	Imports.		Exports.		Imports.		Exports.	
	Value on which duty is assessed.	Rate of duty.	Value on which duty is assessed.	Rate of duty.	Value on which duty is assessed.	Rate of duty.	Value on which duty is assessed.	Value of duty.
Arecanuts ...	Free.	Nil.	Free.	Nil.	Free.	Nil.	Free.	Nil.
Do. in husk ...	do.	do.	do.	do.	do.	do.	do.	do.
Cocoanuts ...	do.	do.	do.	do.	do.	do.	do.	do.
Coir ...	do.	do.	do.	do.	do.	do.	do.	do.
Confectionery ...	Rated and *Ad val.*	5 o/o	do.	do.	Declared.	5 o/o	do.	do.
Copperah ...	Free	Nil.	do.	do.	Free.	Nil.	do.	do.
Cotton goods ...	Rated and *Ad val.*	5 o/o	do.	do.	Rated	5 o/o	do.	do.
Cowries (Máldive)...	Rs. 7·8 ℔ cwt.	do.	do.	do.	Free.	Nil.	do.	do.
Earthenware ...	*Ad val.*	do.	do.	do.	Declared.	5 o/o	do.	do.
Fish, salted ...	Free*	Nil.	do.	do.	Rated.	cts. 50 ℔ cwt.	do.	do.
„ other sorts ...	do.	do.	do.	do.	do.	do.	do.	do.
Grain, Paddy ...	do.	do.	do.	3 annas ℔ maund of 3200 tolas	do.	cts. 13 ℔ bushel	do.	do.
„ rice ...	do.	do.	do.	Nil.	do.	cts. 29 ℔ bushel	do.	do.
Mats (rush) ...	do.	do.	do.	do.	Free.	Nil.	do.	do.
Metal ...	Rated and *Ad val.*	5 o/o	do.	do.	Rated.	Various.	do.	do.
Oil (cocoanut) ...	Free	Nil.	do.	do.	Free.	Nil.	do.	do.
Provisions ...	Rated and *Ad val.*	5 o/o	do.	do.	*Ad. val.*	5 o/o	do.	do.
Silk ...	do.	do.	do.	do.	do.	do.	do.	do.
Spices ...	do.	do.	do.	do.	do.	do.	do.	do.
Sugar, candy,(China)	Rs. 22 ℔ cwt.	do.	do.	do.	Rated.	Rs. 2·50 ℔ cwt.	do.	do.
„ „ loaf ..	Rs. 26 do.	do.	do.	do.	do.	do.	do.	do.
„ „ soft ...	Rs. 16·8 do.	do.	do.	do.	do.	Rs. 1·25 ℔ cwt.	do.	do.
„ other sorts of sacharine produce	*Ad val.*	do.	do.	do.	do.	cts. 50 ℔ cwt.	do.	do.
Tea, black ...	10 annas ℔ lb	do.	do.	do.	do.	cts. 25 ℔ lb.	do.	do.
„ green ...	Rs. 1·2 ℔ lb.	do.	do.	do.	do.	do.	do.	do.
Tobacco, manufactured	*Ad val.*	do.	do.	do.	do.	cts. 17 ℔ lb.	do.	do.
„ unmanufactured	*Ad val.*	do.	do.	do.	do.	cts. 9 ℔ lb.	do.	do.
Tortoise Shell ..	Rs. 6 ℔ lb	do.	do.	do.	*Ad. val.*	5 o/o	do.	do.

(4)

It is unlikely that slave vessels from Muskat now venture to the Máldives. Even fifty years ago their visits were rare. Christopher mentions that about five years before the time he wrote a vessel had arrived at Málé (*circa*, 1830) and sold about 25 lads at an average price of Rs. 80 each †.

By Treaties of August and September, 1822, and May 31st, 1839, the Imauns of Muskat bound themselves to use every effort for the suppression of the slave trade within their dominions, and by the Further Agreement of October 2nd, 1845, it was stipulated that this trade should definitely cease after 1st January, 1847.

* Except into the Bombay Presidency, where 12 annas per cwt. is charged.

† Trans. Bom. Geo. Soc., 1836-8, p. 82.

THE MÁLDIVES.

TRADE AND COMMERCE.

(5)

In 1843, when the obnoxious Navigation Laws (finally abolished by 12 & 13 Vict. c. 29) still remained in force, a question regarding the right of Máldive and Lakkadive vessels to land goods at Ceylon in their passage to and from the continent of India led to the boats of these Islands being placed on the same footing as British vessels.

By Order in Council dated 21st January, 1823, and subsequently by Act of 3 & 4 Wm. IV. c. 54, trade with Ceylon could only be conducted in British vessels or vessels of friendly foreign States exercising reciprocal indulgence.

Upon it being pointed out to the Board of Customs in England that the privilege of free trade had hitherto been allowed these Islanders, that their situation was peculiar, and that they were under the protection of the Indian and Ceylon Governments, it was not deemed expedient to disturb the practice which had always prevailed.

A.

THE MÁLDIVE ISLANDS.

VALUE of IMPORTS into, and EXPORTS from BRITISH INDIA and CEYLON.

(Converted into sterling at 2s. the rupee.)

Year.	Bengal.		Madras.		Total of British India.		Ceylon.		British India and Ceylon.		Combined Import and Export trade with British India.	Combined Import and Export trade with Ceylon.	Combined Import and Export trade with British India and Ceylon.
	Imports.	Exports.	Imports	Exports.	Imports.	Exports.	Imports.	Exports.	Total Imports.	Total Exports.			
£	£	£	£	£	£	£	£	£	£	£	£	£	£
1841	13,433	11,731	6,549	...	20,082	...	...	...	...	...	...	...	...
1842	15,716	4,368	10,170	...	15,886	...	...	...	...	...	...	...	...
1843	10,279	3,848	6,921	...	17,218	...	...	...	...	...	...	...	...
1844	16,344	3,458	7,498	...	13,842	...	...	...	...	...	...	...	...
1845	18,190	8,937	7,325	...	25,515	...	...	...	...	...	...	...	...
1846	17,413	9,562	6,728	...	14,141	...	...	...	...	...	...	...	...
1847	19,082	7,655	6,247	...	25,329	...	...	...	...	...	...	...	...
1848	20,573	14,403	4,632	2,620	25,205	17,023	...	...	...	...	42,228	...	...
1849	15,178	8,843	6,286	5,896	21,464	14,739	...	...	...	...	36,203	...	...
1850	16,453	10,845	5,630	3,352	12,083	14,207	...	...	...	...	26,290	...	...
1851	15,748	7,945	4,956	3,301	20,704	11,246	...	...	...	...	31,950	...	...
1852	13,629	6,063	3,339	2,051	16,963	8,114	...	...	...	...	25,082	...	...
1853	8,339	6,119	5,582	1,769	13,921	7,888	...	...	...	...	21,809	...	...
1854	11,633	6,035	5,174	1,538	16,807	7,573	...	...	...	...	24,380	...	...
1855	20,752	22,666	487	496	21,239	23,162	...	...	...	...	44,401	...	...
1856*	12,877	12,678	2,205	756	15,082	13,434	31,934	5,072	47,016	18,506	28,516	37,006	65,522
1857	13,972	13,585	610	427	14,582	14,012	28,531	4,032	43,113	18,044	28,594	32,563	61,157
1858	16,305	11,575	3,276	601	19,581	12,176	24,508	4,314	44,089	16,490	31,757	28,822	60,579
1859	10,156	9,567	882	424	11,038	9,991	25,479	5,749	36,517	15,740	21,029	31,228	52,257
1860	17,761	19,767	838	387	18,599	20,154	20,136	5,101	38,735	25,255	38,753	25,327	63,990
1861	21,765	26,003	365	214	22,130	26,217	26,649	6,740	48,779	32,957	48,347	33,389	81,736
1862	20,313	17,165	823	399	21,136	17,564	35,604	9,385	56,740	26,949	38,700	44,989	83,689
1863	17,669	18,890	1,653	617	19,322	19,507	32,978	7,418	52,300	26,995	38,829	40,396	79,225
1864	29,893	27,272	1,440	414	31,333	27,686	41,881	6,741	73,214	34,427	59,019	48,622	107,641
1865	21,313	22,374	2,288	677	23,601	23,051	31,129	6,079	54,730	29,130	46,652	37,208	83,860
1866	28,077	25,587	1,419	816	29,496	26,568	29,789	4,255	59,285	30,823	56,064	34,044	90,108
1867†	...	...	...	...	19,353	38,864	44,531	9,074	63,884	47,938	58,217	53,605	111,822
1868	17,294	26,848	17,795	3,906	35,089	31,399	26,914	6,579	62,003	37,978	66,488	33,493	99,981
1869	33,571	31,351	25,190	5,605	‡ 59,030	39,014 ‡	30,104	4,774	89,134	43,788	98,044	34,878	132,922
1870	31,117	31,643	21,561	7,048	52,760	39,324	33,536	5,709	86,296	45,033	92,084	39,245	131,329
1871§	...	...	...	...	48,614 ‖	‖ 38,907	39,683	10,413	88,297	49,320	87,521	50,096	137,617
1872	...	...	...	...	68,222	38,849	40,427	12,776	108,649	51,625	107,071	53,203	160,274
1873	...	...	...	...	50,711	31,567	40,666	15,819	91,377	47,386	82,278	56,485	138,763
1874	...	...	...	...	40,790	27,487	37,744	25,584	78,534	53,070	68,277	63,328	131,605
1875	...	...	...	...	29,562	29,829	35,231	25,109	64,793	54,938	59,391	60,340	119,731
1876	...	...	...	...	26,026	34,758	39,955	34,554	65,981	69,312	60,784	74,509	135,293
1877	...	...	...	...	21,954	32,635	35,395	21,105	57,349	53,740	54,589	56,500	111,089
1878	...	...	...	...	20,562	34,485	26,964	25,091	47,526	59,576	55,047	52,055	107,102
1879	...	...	...	...	29,297	42,110	34,273	32,970	63,570	75,080	71,407	67,243	138,650
1880	...	...	...	...	18,085	27,519	39,215	38,743	57,300	66,262	45,604	77,958	123,562
1881	...	...	...	...	24,276	38,997	37,150	35,293	61,426	74,290	63,273	72,443	135,716

* Prior to 1856 the Máldives were included under the head "Other Countries" in the Ceylon Blue Books.

† Prior to 1867 the Indian financial year closed on April 30th; since then it has ended on March 31st. The returns for 1867 are for 11 months only.

‡ Another return gives the figures for 1868-70 as:—

	British India.		Combined trade with British India.	Combined trade with British India and Ceylon.
	Imports.	Exports.		
1868...	34,020	30,882	64,902	98,495
1869...	63,782	38,414	102,196	137,074
1870...	49,608	38,584	88,192	127,537

§ Since 1870 the Máldives appear to have been included under the head "Other Countries" in the Bengal and Madras returns.

‖ Including the Lakkadives and Minakaï, classed since 1875 among British India Ports.

B.

THE MÁLDIVE ISLANDS.

IMPORTS.

COMPARATIVE STATEMENT of the VALUES of the PRINCIPAL ARTICLES Imported into BRITISH INDIA* and CEYLON† from the Máldive Islands.

(Converted into sterling at 2s. the rupee.)

Year.	Cocoanuts.		Coir.		Confectionery, and Provisions.		Copperah.		Cowries, and Shells.		Fish, dried and salted.		Fish-blood.		Mats.		Sugar, jaggery, &c.		Tortoise-shell.		Grain.	
	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.	British India.	Ceylon.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
1853 ...	8,668	—	2,716	—	1,258	—	—	—	379	—	34	—	—	—	—	—	293	—	314	—	12	—
1854 ...	11,500	—	—	—	833	—	—	—	445	—	—	—	—	—	1	—	371	—	184	—	190	—
1855 ...	16,654	—	—	—	461	—	—	—	881	—	—	—	—	—	—	—	1	—	220	—	—	—
1856 ...	10,748	—	—	13	671	163	—	39	2,008	15,905	—	14,262	—	—	10	14	—	—	94	1,157	—	21
1857 ...	10,003	72	—	4	—	206	—	2	—	13,865	—	10,948	—	78	—	20	—	—	—	1,657	—	1,573
1858 ...	10,094	100	—	76	—	118	—	1	—	10,317	—	9,771	—	70	—	6	—	—	—	1,042	—	10,003
1859 ...	—	126	—	544	—	153	—	—	—	6,632	—	15,092	—	185	—	19	—	—	—	867	—	15,135
1860 ...	9,593	40	—	540	—	254	—	3	—	4,143	—	13,098	—	94	—	—	—	22	—	1,778	—	34
1861 ...	16,197	—	—	500	—	490	—	—	—	4,825	—	15,616	—	107	—	61	—	4	—	743	—	3,773
1862 ...	14,123	174	—	590	—	382	—	10	—	4,321	—	23,477	—	128	—	23	—	4	—	630	—	5,704
1863 ...	13,942	220	—	851	—	622	—	70	—	5,161	—	21,998	—	81	—	92	—	3	—	1,118	—	2,529
1864 ...	24,691	36	—	496	953	592	—	6	—	2,501	—	25,790	—	132	—	174	—	12	—	1,519	—	10,367
1865 ..	16,942	44	—	158	—	498	—	17	—	990	—	23,495	—	78	—	146	—	5	—	1,510	—	4,053
1866 ...	17,450	87	—	108	—	576	—	—	—	89	—	24,109	—	154	—	173	—	8	—	996	—	3,279
1867 ...	—	44	—	1,451	—	728	—	—	—	1,113	—	22,616	—	51	—	33	—	30	—	992	—	16,939
1868 ...	—	28	—	462	—	729	—	—	—	481	—	21,232	—	61	—	59	—	10	—	1,377	—	2,380
1869 ...	—	—	—	1,027	—	—	—	25	—	574	—	25,543	—	68	—	189	—	8	—	1,072	—	892
1870 ...	28,432	—	7,940	738	1,692	453	—	—	6,774	1,884	—	25,696	—	—	—	93	2,976	8	—	1,476	—	3,142
1871 ..	24,933	651	9,736	960	2,150	730	—	50	5,631	2,222	—	27,436	—	—	—	123	3,929	21	—	1,462	—	5,938
1872 ..	46,241	3	9,702	879	2,304	406	—	19	3,981	2,750	—	31,291	—	—	—	63	3,744	4	—	1,651	—	3,149
1873 ...	35,780	83	9,051	2,352	1,563	879	—	6	1,879	2,283	—	32,763	—	—	—	90	1,845	49	—	1,664	—	282
1874 ...	26,701	22	7,143	1,584	1,520	472	—	62	2,573	1,632	—	30,222	—	—	—	49	2,502	203	—	1,778	200	1,141
1875 ...	20,330	16	3,301	2,629	2,022	525	—	31	3,886	1,358	—	27,949	—	—	—	136	—	10	—	2,184	—	51
1876 ...	17,537	28	3,684	1,589	1,209	490	—	20	2,792	224	—	35,548	—	—	—	47	—	23	—	1,267	—	556
1877 ...	15,169	165	4,288	2,645	350	672	—	35	1,914	212	—	28,055	—	—	—	150	—	22	—	1,528	—	1,669
1878 ...	15,256	—	2,381	4,331	221	539	—	2	2,629	993	—	18,527	—	—	—	38	—	15	—	999	—	1,109
1879 ...	23,937	444	2,931	3,997	440	458	—	6	1,853	1,137	—	26,065	—	—	—	36	—	31	—	1,046	—	778
1880 ..	13,812	—	2,364	2,895	414	430	—	24	1,333	959	—	32,919	—	—	—	22	—	40	—	892	—	421
1881 ...	—	—	—	3,560	—	579	—	19	—	948	—	29,508	—	—	—	23	—	—	—	2,063	—	10

* The figures for British India are very incomplete owing to want of details in the Annual Returns.

† Ceylon returns commence from 1856.

D.

THE MÁLDIVE ISLANDS.

NUMBER and TONNAGE of Vessels entered and cleared (with Cargoes or in Ballast) at Ports of BRITISH INDIA and CEYLON from and to the Máldive Islands.

YEAR.	BENGAL.				MADRAS.				TOTAL OF BRITISH INDIA.				TOTAL SHIPPING (Inwards and Outwards).					
	Entered.		Cleared.		Entered.		Cleared.		Entered.		Cleared.		British India.		Ceylon.		British India and Ceylon.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
1841	—	—	—	—	—	—	—	—	45	2,581	42	2,678	87	5,259	—	—	—	—
1842	—	—	—	—	—	—	—	—	55	3,161	52	3,390	107	6,551	—	—	—	—
1843	—	—	—	—	—	—	—	—	60	3,084	54	2,924	114	6,008	—	—	—	—
1844	—	—	—	—	—	—	—	—	59	2,502	48	3,185	107	5,687	—	—	—	—
1845	—	—	—	—	—	—	—	—	153	13,861	192	26,045	345	39,906	—	—	—	—
1846	—	—	—	—	—	—	—	—	38	2,568	49	3,334	87	5,902	—	—	—	—
1847	—	—	—	—	—	—	—	—	33	1,584	30	1,728	63	3,312	—	—	—	—
1848	—	—	—	—	—	—	—	—	38	2,606	44	3,219	82	5,825	—	—	—	—
1849	—	—	—	—	—	—	—	—	83	3,021	54	3,914	137	6,935	—	—	—	—
1850	—	—	—	—	—	—	—	—	42	3,095	43	3,627	85	6,722	—	—	—	—
1851	18	1,340	18	1,340	16	1,071	17	1,276	34	2,411	35	2.616	69	5,027	—	—	—	—
1852	27	3,315	26	2,585	17	965	26	1,741	44	4,280	48	4,326	92	8,606	—	—	—	—
1853*	—	—	—	—	60	1,444	30	1,132	—	—	—	—	—	—	—	—	—	—
1854	13	1,070	14	1,209	26	1,277	19	847	39	2,347	33	2,056	72	4,403	—	—	—	—
1855	20	1,916	22	2,048	8	175	10	354	28	2,091	32	2,402	60	4,493	65	6,472	125	10,965
1856	13	1,330	28	3,409	13	543	11	404	26	1,873	39	3,813	65	5,686	111	8,529	166	14,215
1857	26	2,674	42	4,907	8	254	8	243	34	2,928	50	5,150	84	8,078	93	9,896	177	17,974
1858	22	2,376	40	5,799	15	1,013	9	716	37	3,389	49	6,515	86	9,904	73	7,745	159	17,649
1859	22	2,124	30	3,507	13	376	10	224	35	2,500	40	3,731	75	6,231	84	8,198	159	14,429
1860	21	2,084	31	3,738	15	462	15	443	36	2,546	46	4,181	82	6,727	80	6,945	162	13,672
1861	36	3,455	37	3,885	4	85	4	85	40	3,540	41	3,970	81	7,510	97	9,274	178	16,784
1862	28	3,001	28	3,329	5	117	9	419	33	3,118	37	3,748	70	6,866	96	11,488	166	18,354
1863	17	2,067	32	3,897	11	367	8	278	28	2,434	40	4,175	68	6,609	83	9,135	151	15,744
1864	41	4,815	45	5,028	7	200	9	383	48	5,015	54	5,411	102	10,426	94	10,279	196	20,705
1865	43	5,246	31	3,753	9	300	8	226	52	5,546	39	3,979	91	9,525	89	8,422	180	17,947
1866	29	4,058	35	4,310	5	385	6	466	34	4,443	42	4,888	76	9,331	84	10,740	160	20,071
1867*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	82	9,427	—	—
1868	16	2,009	24	3,775	113	1,897	50	1,533	129	3,816	74	5,608	203	9,424	70	7,067	273	16,591
1869	14	2,325	11	2,143	120	2,705	35	2,268	134	5,030	46	4,411	180	9,441	85	7,896	165	17,337
1870	4	666	16	2,961	103	1,889	46	1,391	107	2,555	62	4,352	169	6,907	90	10,400	259	17,307
1871	8	1,256	7	1,509	124	2,220	38	953	† 132	3,476	45	2,462	177	5,938 †	88	10,022	† 165	15,960 †
1872	8	1,508	14	2,408	163	2,714	54	1,487	172	4,297	81	5,202	253	9,499	100	9,608	353	19,107
1873	20	2,425	31	4,370	117	2,386	66	2,934	119	2,743	79	5,029	198	7,772	74	9,226	272	16,998
1874	1	118	17	2,270	115	2,865	60	2,415	116	2,983	71	3,946	187	6,929	87	9,201	274	16,130
1875	27	2,844	41	4,470	—	—	—	—	35	2,923	54	6,879	89	9,802	93	10,453	182	20,255
1876	30	3,130	36	3,545	2	213	—	—	41	3,585	58	5,809	99	9,394	124	12,518	223	21,912
1877	21	2,185	26	2,773	2	247	2	867	38	3,918	48	4,838	86	8,756	83	9,164	169	17,920
1878	25	2,867	33	3,835	2	182	1	116	34	3,411	40	3,950	74	7,361	78	7,835	152	15,196
1879	—	—	—	—	—	—	—	—	35	3,393	47	4,889	82	8,282	135	16,566	217	24,848
1880	—	—	—	—	—	—	—	—	30	3,177	40	4,172	70	7,349	131	12,928	201	20,277
1881	—	—	—	—	—	—	—	—	41	4,087	57	6,023	98	10,110	128	13,651	226	23,761

* British India returns for 1853 and 1867 not forthcoming.

† Including the Lakkadives and Minakai, classed among British India ports since 1875.

E.

THE MÁLDIVE ISLANDS.

NUMBER, TONNAGE and CREWS of BRITISH, FOREIGN, and MÁLDIVIAN Vessels entered from, and cleared to, the Máldive Islands (with Cargoes or in Ballast), at Ports of CEYLON.

YEAR.	British.						Foreign.						Total. (British and Foreign.)						Máldivian.					
	Entered.			Cleared.			Entered.			Cleared.			Entered.			Cleared.			Entered.			Cleared.		
	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.	Vessels.	Tons.	Crews.
1855 ...	—	—	—	—	—	—	—	—	—	—	—	—	34	3,433	638	31	3,039	671	22	1,556	482	20	1,413	458
1856 ...	29	3,839	690	19	2,697	382	28	1,111	558	25	882	473	57	4,950	1,248	44	3,579	855	28	1,089	540	27	1,089	526
1857 ...	25	3,793	597	29	4,642	666	20	743	398	19	718	364	45	4,536	995	48	5,360	1,030	21	843	429	23	1,122	481
1858 ...	21	2,991	499	23	3,345	492	20	755	391	19	654	357	41	3,746	890	42	3,999	849	22	922	435	24	1,105	515
1859 ...	30	3,929	647	23	2,964	506	16	696	336	15	609	312	46	4,625	983	38	3,573	818	17	797	370	17	803	378
1860 ...	21	2,506	427	19	2,565	399	21	1,073	457	19	801	392	42	3,579	884	38	3,366	791	28	1,575	627	25	1,326	552
1861 ...	27	3,674	590	23	3,314	513	25	1,225	459	22	1,061	455	52	4,899	1,049	45	4,375	968	29	1,690	590	28	1,471	593
1862 ...	32	4,918	765	20	2,962	482	22	1,781	462	22	1,827	470	54	6,699	1,227	42	4,789	952	26	1,265	573	23	1,161	514
1863 ...	26	3,899	668	24	3,684	533	18	702	346	15	850	268	44	4,601	1,014	39	4,534	801	18	702	346	18	702	346
1864 ...	31	4,644	649	22	3,679	420	21	1,111	411	20	845	401	52	5,755	1,060	42	4,524	821	17	638	349	21	946	434
1865 ...	24	3,914	592	17	2,623	337	25	1,115	448	23	770	392	49	5,029	1,040	40	3,393	730	26	1,147	463	23	770	393
1866 ...	24	3,669	614	21	4,908	479	20	1,146	374	19	1,117	361	44	4,715	988	40	6,025	840	20	1,146	374	19	1,117	361
1867* ...	32	5,538	796	16	2,478	312	18	724	378	16	687	338	50	6,262	1,174	32	3,165	650	23	1,228	472	23	1,285	463
1868 ...	22	3,449	518	10	2,068	227	19	775	395	19	775	395	41	4,224	913	29	2,843	622	19	775	395	19	775	395
1869 ..	19	3,914	503	8	1,698	172	32	1,325	579	26	959	479	51	5,239	1,082	34	2,657	651	32	1,325	579	27	989	494
1870 ...	30	5,481	751	17	2,927	372	22	873	418	21	1,119	448	52	6,354	1,169	38	4,046	820	22	873	418	20	947	418
1871 ...	29	4,752	653	17	2,908	331	21	1,181	445	21	1,181	445	50	5,933	1,098	38	4,089	776	21	1,181	445	21	1,181	445
1872 ...	34	4,462	602	20	2,742	363	20	736	383	26	1,668	516	54	5,198	985	46	4,410	879	28	2,227	569	35	3,118	719
1873 ...	28	3,871	532	15	1,961	289	19	2,254	331	12	1,140	259	47	6,125	863	27	3,101	548	21	2,725	391	14	1,882	309
1874 ...	21	3,352	401	14	1,710	205	24	1,825	384	28	2,314	445	45	5,177	785	42	4,024	650	29	2,835	515	30	2,748	495
1875 ...	24	2,892	470	19	3,021	348	29	2,967	450	21	1,573	348	53	5,859	920	40	4,594	696	32	3,427	545	26	3,220	497
1876 ...	30	4,042	524	15	2,042	305	39	3,167	515	40	3,267	533	69	7,209	1,039	55	5,309	838	40	3,267	547	40	3,267	533
1877 ...	48	5,463	814	29	3,263	361	3	254	67	3	184	69	51	5,717	881	32	3,447	430	6	534	153	6	534	152
1878 ...	45	4,768	741	30	2,975	426	2	65	37	1	30	18	47	4,833	778	31	3,005	414	2	65	37	1	30	18
1879 ...	63	9,799	1,039	35	5,554	597	18	589	343	19	624	362	81	10,388	1,382	54	6,178	959	18	589	343	19	624	362
1880 ..	57	6,756	908	44	5,058	597	15	574	307	15	540	313	72	7,330	1,215	59	5,598	910	15	574	307	16	623	338
1881 ...	65	8,073	1,039	40	4,570	577	12	447	230	11	561	198	77	8,520	1,269	51	5,131	775	13	664	271	12	644	232

* The Returns are probably for 11 months only, as the financial year, which prior to 1867 closed on April 30th, ended in that year, and has ended since annually, on March 31st.

VIII.—MONEY, WEIGHTS, AND MEASURES.

TRADE at the Máldives has always been conducted for the most part by barter.

At the same time, the advantages of a circulating medium could not fail to be recognised, if but partially, at an early period.

Cowries, still employed on occasions, sufficiently served the purpose for centuries. Cowries.

Not to go back to the 9th century—when, as Suleimán the Persian traveller certifies, the Queen's treasury was stocked with cowries, in which lay the Islander's wealth,* Ibn Batúta, writing 500 years later, found them passing as money on the group (A. D. 1344.) "A hundred of these shells is called *syâh*, and 700 *fâl*, 12,000 are called *cotta*, and 100,000 *bostoû*. Bargains are struck through the medium of these cowries at the rate of 4 *bostoû* to a *dînâr* of gold. Often they are of less value, such as 12 *bostoû* to a *dînâr*. The Islanders sell them to the people of Bengal for rice, for they, too, use them for money. They are sold in the same way to the people of Yemen, who use them for ballast in their ships in place of sand. These cowries serve also as a medium of exchange with the negroes in their native country. I have seen them sold at Mâly and at Djoudjou [Soudán] at the rate of 1,150 to a *dînâr* of gold."†

A machinery so cumbrous for the adjustment of an extensive external commerce naturally yielded before the more portable metal currency of intrinsic value introduced by strangers.

The Persians and Arabs—the first to develope the trade of the Máldives—would soon familiarize the Islanders to the use of their money in commercial transactions.

It is interesting, therefore, to learn from Pyrard, that in his time (A.D. 1602–7), with the exception of foreign coins of gold and silver alone, which were accepted at their value by weight, the sole Máldivian coin was a silver "*larin*," evidently copied from the Persian coin of that name then current throughout the East.‡ "The money of the Realm is only of silver. The (coins) are pieces of silver, which they call *larins*, worth as much as eight sous (*sols*) or thereabout of our (French) money, as I have already said; long as the finger, but doubled back. The King has them struck in his Island and his name stamped on them in Arabic characters * * * They make no other coins of less value there, so that for the purposes of their traffic they cut the silver, and hand over a weight of the same value as the goods bought: this, however, cannot be done without some loss, because by cutting the *larin* one loses one twelfth of it * * * * Instead of copper coin (*billon*) they make use of cowries (*coquilles*); 12,000 are worth a *larin*."§ Silver fish-hook *larin*.

To obviate the inconvenience of cutting up the "*larin*" for small payments, this awkward 'fish-hook money' had given way a century later to the circular coins of the same name (M. *lári*), but of baser metal, still in currency.

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* *V. s.*, p. 24. † Gray, quoting *Voyages d' Ibn Batoutah*, Tome IV.

‡ "Le *Larin* est une ancienne monnoye de Balsare et d' Arabie, et qui a cours jusqu' à l'isle de Ceylan, où l'on ne parle que de *Larins*. Cette monnoye est un fil d'argent plié en deux, de la grosseur d'un tuyau de plume ordinaire, et long de deux travers de doigt ou environ. Sur ce fil d' argent ainsi plié on voit le nom du Prince dans les pays duquel cette monnoye a esté fabriquée. Le huit *Larins* font un *or*, et les quatre-vint *Larins* un *toman*."—Tavernier, "Travels," 1625-1664, (A' la Haye, Vol. I., pp. 135-6.) See, too, Rhys Davids in the "International Numismata Orientalia," Vol. I., 1877, 'Ancient coins and measures of Ceylon, pp. 33-5, and the authorities there quoted.

§ Pyrard, pp. 163-4. With considerable difficulty the writer obtained (too late for insertion) a single specimen of this unique coin. It weighs 71½ grains, and is apparently of the purest silver: age doubtful.

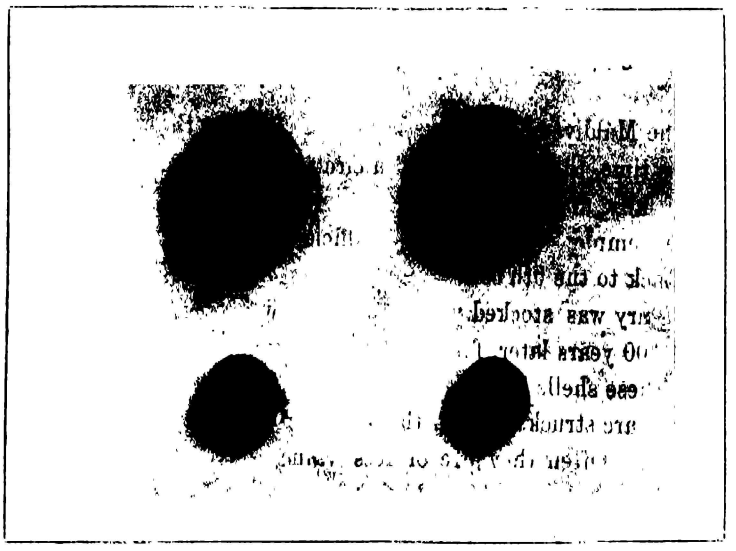
THE MÁLDIVES.

MONEY, WEIGHTS AND MEASURES.

Circular *lári*.

These coins are of two sizes and values, called by the Islanders *boḍu* ('large') *lári* and *kuḍa* ('small') *lári*. They are still struck at the Málé mint, of mixed metal,* and bear on one side the reigning Sultan's name, and on the reverse his title and the date *Anno Hijrae*.

COINS.



The average weight of the modern *boḍu lári* is about 135 grains, and of the *kuḍa lári*—valued roughly at one-fourth (1-4th) the other—about 20 grains.†

At the present day these coins have a nominal exchange value respectively of 25 and 100 to the Bengal rupee; but not being made legal tender at that rate, nor too plentiful, their actual value fluctuates considerably. It is generally about 20 per cent. above their nominal value; a rupee will rarely exchange for more than 20 *boḍu* or 80 *kuḍa lári*.

The *Bengal rupee* is received everywhere for large payments; but money of any kind is scarce, and all gold and silver coins are in request more or less for the melting pot according to their purity.

Kuḍa lári.

4 = *Boḍa lári*

100 = 25 = *Rufiya*

Weights.

WEIGHTS.

The principal are:—

1 *gau* (M. *eg-gau*) or *galé* (M. *eggalé*) = ¼ lb.‡
4 *gau* (M. *hatara-gau*) = 1 *rátalu* = 1 lb.
8 *gau* (M. *ag-gau*) = 1 *boḍi*.
12 *boḍi* (M. *bára-boḍi*) = *tuḷu*.
1 *tuḷu* (M. *et-tuḷu*) = 24 lbs.
1 *man* (M. *em-manu*) = 84 lbs.

Coir is occasionally weighed and sold by the *boḍi*; but of late years, since the arrival of Parsí and "Moor" traders at Málé, the use of the *cwt.* has been gradually superseding all other weights for bulky goods, such as fish, coir, and cowries.

Gau.

4 = *Rátalu*
8 = 2 = *Boḍi*
96 = 24 = 12 = *Tuḷu*
336 = 84 = 42 = 3½ = *Manu*

* An analysis of fourteen of these coins of various dates, made by Mr. A. C. Dixon, B. Sc., shows them to contain 83·54 per cent. copper, 2·61 tin, 13·78 zinc, and a trace of iron. In modern coins the proportion of copper is as high as 95 to 97 per cent.

† Note (1).

‡ A *Cypraea mauritiana* shell bearing the Sultan's seal in wax is the regular 'Imperial *gau*' weight in the Southern Atols.

DRY MEASURES.

Dry Measures.

For grain the following are in use :—

½ *láhi* (M. *baya láhi*).
1 *láhi* or *láse* = 1 *hunḍuwa* (S.)
4 *láhi* = 1 *náliya* = 1 *séruwa* (S.)
4 *náli* = 1 *kotuwa*.
12 *náli* = 1 *fá* or *fara* ('bushel.')
12 *kotu* = 1 *muḷiya*.
300 *náli* = 1 *kaḍiya*.

Fractions and multiples of the above are also sometimes adopted :—

½ *náliya* (M. *baya-náli*) = 2 *láhi* (M. *delahi*).
1½ *náli* (M. *tin-baya-náli*) = 6 *láhi*.
½ *fara* of 10 *náli* (M. *diha-náli-fá*).
2 *muḷi* (M. *dem-muḷi*) = 100 *náli*.
3 *muḷi* (M. *tin-muḷi*) } = 150 *náli*.
½ *kaḍi* (M. *baya-kaḍi*) }
4 *muḷi* (M. *hatara-muḷi*) = 200 *náli*.
5 *muḷi* (M. *fas-muḷi*) = 250 *náli*.

Cowries are now usually sold in the Islands by the *hiya* = 100, the *falé* = 800 to 1,000, and the *koṭṭé* = 12,000 (*bára-fá*).

The Dutch in purchasing cowries reckoned the *koṭṭa* rather by weight than by tale, and latterly insisted on its being made equal to 25 lbs., at which it still remains approximately.

Láhi.				
4 =	*Náliya.*			
16 =	4 =	*Kotuwa.*		
48 =	12 =	3 =	*Fara.*	
192 =	48 =	12 =	4 =	*Muḷiya.*
1,200 =	300 =	75 =	25 =	6¼ = *Kaḍiya.*

LIQUID MEASURES.

Liquid measures.

The two commonly used are :—

Náliya—for oil, ghee, and salt.
Adubá = 5 *láhi*—for jaggery, fish-blood, and vinegar.

LINEAL MEASURES.

Lineal measures.

Inch = *en-igili*.
Foot = *ef-fúṭú*.
Span = *baya-murhé* or *kávayi*.
Cubit = *murhé* or *kuru riya*.
Length of the arm = *boḍu riya*.
Yard = *gazu* = 2 *kuru riya* or 2 *murhé*.
Fathom = *eb-bammé* = 2 *gazu*.
Half mile = *baya-kos*.
Mile = *ek-kos*.

Land is measured by *bammé* (fathoms).

DIVISION OF TIME.

Division of time

Minute = *sahadé*.
Hour = *eg-gadi* = 1 *peya* (S.) = 24 minutes = ∴ 2½ *gadi* = 1 English hour.
Three hours = 1 watch = *ed-dama* (S. *yámaya*).
Day = *duvahu*.
Week = *had-duvas* ('7 days').
Fortnight = *foya duvas*.
Month = *mahaku*.
Year = *aharu*.

Long distances are generally computed by time. For instance :—

Ed-dam hisábu = the distance traversible (sailing) in one watch of 3 hours (*lit.* 'one-watch account').
Ed-duvas hisábu = (the distance of) a day's sail.
Bá-tiris dam hisábu = the distance to Colombo, *i.e.*, 32 watches, or 4 days' sail.

THE MÁLDIVES.

MONEY, WEIGHTS AND MEASURES.

The old Aryan system of chronology (common to the Siṇhalese) rules concurrently with the purely lunar year of the *Hijra* era, adopted since the conversion to Muhammadanism. Sanskrit terms, in Máldive dress, are retained both for the days of the week and the astronomical divisions of the firmament into *rási* and 'lunar mansions' (*nekat*).

Days of the Week.

English.	Máldive.	Siṇhalese.
Sunday ...	... *A'dita*	... *Iri-dá.*
Monday ...	... *Hóma*	... *Sandu-dá.*
Tuesday ...	... *Aṇgára*	... *Aṇgaharuvá-dá.*
Wednesday ...	... *Buda*	... *Budá-dá.*
Thursday ...	... *Burasfati*	... *Brahaspatin-dá.*
Friday ...	... *Hukuru*	... *Sikurá-dá.*
Saturday ...	... *Honihiru*	... *Senasurá-dá.*

NAUTICAL INSTRUMENTS.

Nautical Instruments.

The Máldivians, following 'the sexagesimal system', divide the circle into 360 degrees. They make use of the modern mariners' compass (M. *samugá*), and copy the Arab navigators in the notation of its 32 points* :—

N = *gavvu* or *gahá.*

N by W. = *farugadi*	*astamán*	N. by E. = *farugadi*	*trán.*
N. N. W. = *násí*	do.	N. N. E. = *násí*	do.
N. W. by N. = *nágá*	do.	N. E. by N. = *nágá*	do.
N. W. = *a'yúgu*	do.	N. E. = *a'yúgu*	do.
N. W. by W. = *gásilu* or *gasal*	do.	N. E. by E. = *gásilu* or *gasal*	do.
W. N. W. = *simágu*	do.	E. N. E. = *simágu*	do.
W. by N. = *tura'yánu*	do.	E. by N. = *tura'yánu*	do.
W. = *murigu*	do.	E. = *murigu*	do.
W. by S. = *jauza*	do.	E. by S. = *jauza*	do.
W. S.W. = *tíru*	do.	E. S. E. = *tíru*	do.
S. W. by S. = *agurabu*	do.	S. E. by E. = *agurabu*	do.
S. W. = *galbu*	do.	S. E. = *galbu*	do.
S. W. by S. = *himáriyan*	do.	S. E. by S. = *himáriyan*	do.
S. S. W. = *silli*	do.	S. S. E. = *silli*	do.
S. by W. = *sillaváru* or *sullaváru*	do.	S. by E. = *sillaváru* or *sullaváru*	do.

S. = *suhailu* or *dakunu.*

"These names would seem to point to a time anterior to the invention of the magnetic compass, when, indeed, the only way of ascertaining the relative position of a ship at night in the broad ocean was by observing the points of the horizon where prominent stars rose and set. The system could only have been adapted to intertropical navigation, wherein no very great variation occurs in these azimuths, and it is necessarily but an approximation to truth, as hardly any of the prominent stars selected rise or set at the precise azimuth named from them.†"

Their *quadrant* or T shaped cross-bow for taking bearings (M. *digu-fila*) is a rudely-designed but ingenious instrument. It is merely a square wooden rod, with a cross piece at one end, on which the divisions are laid off, and a sliding radius, but capable of giving very accurate results.

"To avoid looking at the sun the eye is directed to the opposite point of the horizon, [through a tiny hole in a slightly-projecting metal plate at] the lower end of the cross-bar, while it brings the solar shadow of the upper end of the same to meet the horizon by

* The names are transcribed from a list obtained from a Máldive *Mu'allim.* Subsequently the writer met with Prinsep's careful "Note on the Nautical Instruments of the Arabs" (Jour. Bengal A. S., Vol. V., 1836, pp. 784-94), in which is given a very similar list in Máldivian-Arabic character. The whole article will repay perusal.

† Prinsep, (*loc. cit.* p. 788), who proceeds to identify the majority of the stars upon which the Máldivians sail in accordance with the old Arab treatises on navigation.

adjusting the slider to or fro on the divided arm."* The *bilistry*, or astrolabe, (M. *ré-fila*) is of yet simpler construction.

The Islanders are, besides, well acquainted with the European sextant, which they call *góduran*.

NUMERATION.

Numeration.

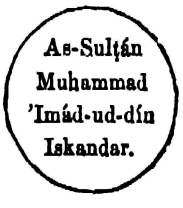
The inconvenient duodecimal mode of numeration was formerly exclusively used by the Máldivians—the numerals from 1 to 12 being almost identical with the Siṇhalese; but though still in vogue here and there, is gradually dying out, and rarely employed in business calculations. Beyond 10 a modified form of the Hindústání decimal numeration is that in common use. Some confusion, however, arises from the co-existence of the two systems; thus, *fanas* or *fansás* may be either 48 or 50; *hiya* or *satéka*, 96 or 100.

NOTES.

Notes.

COINS. The specimens given are of nearly the last issue from the Málé mint, prior to the death of the late Sultan. The present Sultan, Ibráhím Núr-ud-dín, has not yet uttered a coinage.†

Obverse.



i.e.,
"Sultan Muhammad 'Imád-ud-dín Iskandar."

Reverse.

i.e.,
"Sultan of land and sea. A. H. 1294" [A.D. 1877].‡

* Prinsep, *loc. cit.* p. 787. A comparison of the actual divisions on the *digu-fila* with a scale of cotangents showed that the Máldive instrument was constructed on correct principles.

† As it is doubtful whether a single specimen of these coins is to be found in any Museum, a detailed description of the collection in the writer's own cabinet, dating from A. H. 1129 [A. D. 1716-17] to A. H. 1298 [A. D. 1880] will shortly be communicated to the Royal Asiatic, or Numismatic, Society.

‡ Date of *kuḍa lári* specimen, A. H. 1292, *i.e.*, A. D. 1875.

APPENDIX A.

POLITICAL STATUS OF THE SULTAN.

It may not be disadvantageous to attempt to set at rest the question of the exact political status of the Máldive Sultan as regards the English Government in Ceylon.

The Sultans have been past the records of their country Sovereigns of the Máldive group, and have ever, as far as is known, exercised supreme rule in the internal affairs of the Islands uncontrolled by other nations, except on the rare and temporary occasions of forcible foreign interposition, such as that of the Portuguese in the 16th century.

Their external sovereignty, or "independence in respect to all other political societies," originally complete, has suffered modification, varying in degree, certainly since the Portuguese conquest (*circa* 1552), if not from the period of Muhammadan supremacy some centuries earlier.

Portuguese period.

At the commencement of the 16th century the Máldive Sultans appear to have been mere vassals of the "Moor" merchants at Cannanore,* and later of the Portuguese at Goa, indirectly paying them tribute, and having ceased, in the strict sense, to be independent sovereigns.†

The terms of the treaty of peace obtained by the Islanders at the conclusion of a subsequent protracted struggle with the Portuguese in the same century are given in detail by Pyrard. The compact guaranteed a restricted sovereignty to the Sultans, but as virtual tributaries of Portugal. (*V. supra*, p. 29).

The benefits resulting from alliance with the chief European power in the East could not but be recognised. Upon the ascendancy, therefore, of the Dutch in Ceylon, the Sultans wisely courted their friendship and protection by tacitly transferring the allegiance hitherto accorded to the Portuguese. (*V. s.*, p. 30.)

Dutch period.

The alliance begun with the Dutch upon the principle of mutual advantage has been cementing during a series of more than two centuries by the exchange of good offices, so that at this time it has ripened into something approaching a sincere attachment.

Our influence in the Máldive Islands, as that of the Dutch before us, is founded on the free will and consent of the Sultans. From their confidence in our attachment and our power they made themselves the feudatories, first of Holland, and subsequently of Great Britain, by placing themselves, of their own accord, under the protection of the successive Governments in Ceylon.

English period.

It is a matter of surprise that a connection of nearly two hundred and fifty years' standing should have subsisted without any specific treaty or agreement,—unless, indeed, the annual letters are held to have the force of a treaty renewed year by year. Possibly it may be owing to this circumstance that the friendship has continued so long. "Where express stipulations are established as the ground of an alliance, the parties are so much upon their guard, and so watchful of the conduct of each other, that jealousy and distrust too often assume the place of confidence and good will. By maintaining a connection upon the mutual exchange of good offices without expressly defining the views and wishes of either party, such a latitude is given as cannot fail of producing confidence and friendship."‡

In the absence of any express treaty, ample evidence of the status of the Sultans may, however, be deduced from the official correspondence with the Ceylon Governors, taken in connection with the fact of the annual embassy.

The Portuguese enforced an actual tribute of coir and cowries. The Dutch confined their demand to the latter commodity under the pretence of trade, but in reality rendered the burden heavy by constantly insisting on larger supplies, purchasable at fixed rates much below market value. It was left for the English to be content with the annual "presents," the tender of which by the Sultan's Ambassador, though reciprocated by return presents of a similar description, if of

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* Barbosa (Collecçao de Noticias para a Historia e Geographia das Naçoes Ultramarinas, Tom. II. p. 352).

† The earliest treaty was concluded with the renowned Alboquerque in A. D. 1512:—Legatus praeterea quidam a rege omnium, qui Maldiuenses insulas imperio tenebant, amplissimo, ad illum venit; & ab eo nomine regis sui postulauit, vtillum in fidem et clientelam reciperet. Illum namq, velle regis Emmanuelis imperio subdi, & tributum constitutum summa fide persoluere. Hujus promissi foedus statim fuit rite percussum, et Saracenus quidam, Manuelles nomine, qui aliquot illius insulas occuparat, ex illis excedere jussus. Quod sine vlla recusatione confectum repente fuit."—(Osorius, *De Rebus Emmanuelis Regis Lusitaniae inuictissimi, virtute et auspicio, &c., gestis.* Lib. VIII., 229, 1597).

‡ Sir T. Rumbold, "Considerations upon the present political state of the Company in India," Madras, 1780, (Sixth Report, Committee of Secrecy, p. 970).

greater value, is no less tantamount to the payment of tribute than the yearly delivery of an elephant to the Madras Government by the Rájá of the petty Púdúkottái State.

As regards the wording of the annual letters from the Sultans, a few extracts will suffice to show that the feudal relation with the dominant European power in Ceylon has continued undissolved to the present day.

Under the Dutch, as early as 1718, Sultan M. 'Imád-ud-dín Muzaffar writes to Governor Rumpf:—"Beneath the protection of Your Excellency, as under the shade of a spreading tree, I am continuing in health and prosperity, and shall henceforth always look for Your Excellency's powerful favour towards me, being assured of Your Excellency's remembrance of me here; for in case of attack from (foreign) enemies or other ill-meaning parties, I, an insignificant person, have no other to rely on for help save Your Excellency." 'Protection from enemies' is the keynote taken up by his son, Sultan Ibráhím Iskandar,* and constantly restruck throughout the Sultans' letters to the Dutch Governors during this century. On their part the Dutch, always cautiously avoiding specific promises of armed assistance and protection, were profuse in assurances of a negative nature.†

Coming to the English period of rule in Ceylon. In 1805 Sultan M. M'uín-ud-dín expressed himself:—"I humbly beg Your Excellency will be so kind as to treat Me and My people like the other Governors of Colombo used to do; and should any hostilities be committed by any nation against Maldive Island, I request Your Excellency will be so kind as to protect Us." To which Sir Thomas Maitland replied:—"I shall do everything in My power to promote the good understanding which subsists between us"—stereotyped phraseology annually repeated to the present time, which, in the connection, can mean nothing less than an implied acknowledgment and acceptance of the *rôle* of protector.

Again in 1817 the Sultan writes:—"In conformity to the relations of amity subsisting between Your Excellency and Me, which will ever continue advancing, I beg Your Excellency, if any one should declare himself My enemy, to defend Me on such occasions by making war with such person."‡ And in 1822:—"I beg Your Excellency will have mercy on Me and protect Me by making war with My enemies."§

Ahmad Dídí, the late Sultan's uncle and Prime Minister, in a letter to Governor Campbell in 1841, says:—"Your Excellency's Government being a great protection to Our islands, I entreat for a continuation of Our friendship."

In 1849 Sultan Muhammad 'Imád-ud-dín writes:—"We have been faithful to friendship and We have the honour of Your alliance and protection against Our enemies, to whom, if Your Excellency knows them to be so, Your Excellency will not extend Your auspices."‖

The following year:—"We highly appreciate the influence which We have the honour to possess in the alliance and protection We have from You against Our enemies."¶

The expression is varied slightly in 1855:—"As Kings are gracious and live in kindly fellowship with each other, so We hope that You will deal with Us in a friendly manner and treat Our enemies as Your own."

Should it, however, be held that a defensive alliance, if existing at all, has been created merely on the Sultan's own part, and is not warranted by the cautious negative language adopted generally in the replies of the Ceylon Government, this cannot be urged of the Governor's letters of 1828-29 and 1832. To the appeal for aid against the Lakkadivians in 1828, Sir E. Barnes (prepared to act on the sound principle which should govern these compacts, viz., 'clearly menaced injustice may be prevented by an ally') answered:—"If any attack is made upon Your Highness by the Laccadivians, or any other native power, without any connection with, or countenance from, the East India Company, I shall feel disposed to render Your Highness every assistance which the justice of Your case, when more fully explained, may appear to deserve."**

In 1829 again:—"The protection and assistance of the British Government of Ceylon will continue to be readily extended to the vessels and natives of the Máldive Islands, and a reciprocal amity and good understanding is expected from the Sultan's people to the British interests.††

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* *E. g.*, Sultan's letters of 1722 and 1735. † *E. g.*, Dutch Governor's replies of 1722 and 1727.

‡ Sultan's letter, A.H. 1232. (Translation dated September 29th, 1817.) See also letters of 1819, 1821, 1831, 1832, 1835, 1837, 1838, 1839, 1841, and 1844.

§ Sultan's letter, A.H. 1239. ‖ Sultan's letter, A.H. 1265.

¶ See also letters of 1853, 1854, and from 1858 to the present day.

** Governor's reply, dated December 8th, 1828. †† Reply, dated December 9th, 1829.

"Your Ambassador," wrote Sir R. Wilmot Horton in 1832, "had the opportunity of seeing the Admiral Commanding the Fleets of the King, my master, in those seas, who promised to afford all protection to Your ships, and received an assurance of similar assistance on Your part."*

To sum up. It appears from the above :—

(i.)—That the Máldive Sultans have voluntarily courted defensive alliance with the dominant European power in Ceylon by placing themselves of their own accord under its protection, and by the tender of actual or virtual tribute.

(ii.)—That in the absence of any express treaty or agreement, the *rôle* of suzerain has been accepted by each power in turn, by inference clearly deducible from official correspondence.

(iii.)—That the present political status of the Máldives is that of a semi-sovereign State, under the exclusive protectorate of the English Government in Ceylon—a relation very similar to that of the King of the Isle of Man with John of England, established by Treaty of A. D. 1212.

The following remarks of Sir T. Rumbold, when Governor of Madras in 1780, explaining the position of the Nawáb of the Carnatic with regard to the East India Company, apply *mutatis mutandis* with equal force to the connection, of a century later, between the Ceylon Government and the Máldive Sultan.

"It must be confessed that the want of some precise line for the guidance of this Government in its intercourse with the *Sultans*, such as is clearly laid down in the engagements between the Indian Government and the Protected States (*e.g.*, of Rájput, Burdela, Málwá, &c.) may be productive of some embarrassment. The *Sultan* has always been considered and treated by the English as an independent Prince; but it has not yet been settled by express stipulation, how far the *Sultan*, in virtue of his independence, or the *Ceylon Government* in the character of his friends and protectors, should direct and superintend the external interests of the *Máldive Islands*. If this right belongs solely to the *Sultan*—as in the eye of international law it undoubtedly does until it has passed, not by inference, but *per expressum*—this Government may be without, and even against their consent drawn into measures affecting their own interests and possessions. On the other hand, if the *Ceylon Government*, in virtue of their character as protectors of the *Sultan's* dominions, claim the right of directing the interests of the *Máldive Islands*, then they infringe the acknowledged independency of the *Sultan*, and become, in fact, the rulers, instead of the defenders of his country. It seems reasonable, indeed, that the Government who have taken upon themselves the office of protector should be allowed the lead in all political transactions that affect the *Máldives*, and this the *Sultans* have admitted *suâ sponte* by appealing to the *Ceylon Government* whenever likely to be involved in difficulties with foreign powers. But should the *Sultan* claim the privilege of acting for himself, the *Ceylon Government*, if determined to follow the strict law of nations, may find themselves perplexed until it be absolutely settled how far they or the *Sultan* are to yield upon any difference of opinion.

"It is easy to imagine that in certain eventualities no small advantage would be derived from an exclusive influence in the *Sultan's* dominions sufficient to establish a decided superiority and to exclude all competitors. A sense of interest suggests both the importance of so useful an attachment, and also how embarrassing might be our situation if that attachment should ever be dissolved or transferred to another European nation. Fortunately, the benefits resulting from this connection are reciprocal; and the *Sultans*, having received at least as much advantage from our alliance and support as we have derived from their friendship, are equally bound upon principles of gratitude and interest to remain steadfast in their attachment to the English."†

Another question arising from the present undefined relationship with the Máldive Sultan (which, though of minor importance, has already cropped up more than once, and is likely to recur at any moment) is to what extent, if at all, should the Ceylon Government hold themselves responsible for disbursements made directly or indirectly by other Governments on account of the Sultan's subjects.

It seems to have been accepted of late years that this Government is bound, according to received and long-standing custom, to pay all charges for the relief of Máldive sailors in actual distress, in return for the assistance and hospitality expected of the Sultan towards persons shipwrecked on his coasts.

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* Governor's reply, dated December 14th, 1832.

† Sir T. Rumbold, *loc. cit.* (quoted in Parliamentary Papers, 1861, East India, 'Nawaubs of the Carnatic').

Opinions will hardly be divided as regards the justice and sound policy of the liberal line of action which the Government have apparently determined to adopt for the future; but it is a misapprehension to suppose that it is altogether warranted by former precedent, or necessarily required of this Government from the nature of the connection which has always existed with the Sultans.

The Sultans most certainly understand, and have always understood, that the protection and favour of the Government in Ceylon is dependent on the succour they afford to shipwrecked European subjects. Always forward to admit that the obligation is entirely on their side, they have eagerly embraced every opportunity of proving the sincerity of their attachment and gratitude. It is true that reciprocal aid to British and Máldive subjects has been stipulated for since the commencement of English rule in Ceylon, but it is equally true that the Sultans, up to thirty years ago, at least, offered, and were expected to recoup this Government for any sums spent on behalf of Máldivians detained in Ceylon ports by stress of weather or other cause.

In 1798 an account amounting to Rs. 500 was tendered to the Sultan for repairs to his vessel and allowance to the crew. The Sultan's letter of 1804 contains a distinct request that the Governor would allow subsistence to the Máldive vessels on his account.* But not to go back further than 1850, the late Sultan specially desired the Governor to notify to his Ambassador the sum spent the previous year for the maintenance of the Ambassador and crew, and for repairs to his vessel, that it might be refunded. "It is desirable that We should be acquainted with what amount was advanced, and We beg Your Excellency will let Us know the same."† The sum was £40. It is the more strange, therefore, that within a few years Government authorized (1856), without query or comment, a special grant, in Colombo alone, of £20 to Máldivians alleged to be sick and destitute, and that similar allowances were conceded in succeeding years, viz., £50 in 1857, a smaller sum in 1858, £50 in 1859, £10 in 1862, and £30 in 1866. Those grants were in some instances fondly made—not to luckless Máldivians cast adrift in Ceylon by shipwréck or other accident beyond their control, but to Islanders who had deliberately left their country *more suo* without a copper chally, and provisions barely sufficient for the voyage, trusting to the charity of the Government or of their co-religionists in Ceylon for maintenance until the change of the monsoon allowed of their departure—to men who actually refused work on the preposterous plea that they were the Sultan's subjects!

A recent claim by the Indian Government (1879) for Rs. 3,679 in reimbursement of expenses incurred for the maintenance and despatch to their country of a crew of Máldivians picked up from a sinking vessel in the Bay of Bengal brought the question prominently forward. By the Secretary of State's Despatch, No. 59, dated 26th March, 1872, the Indian Government is liable to bear the expenses incurred in relieving distressed seamen who are subjects of that Government, *i. e.*, natives of British India. As the seamen in question were held to be neither subjects of the Indian Government, nor were serving in a British ship at the time of their rescue, the Indian authorities considered it advisable to prefer a claim against the Government of Ceylon, under the evident impression that the incidence of the charge, resting immediately upon this Government, would probably be transferred ultimately to the Máldive Sultan. The claim was paid and accepted—though not without some hesitation—as a legitimate liability of the Colony; but it was hinted that, had the relations of this Government with the Sultan been of less vague a character, some pressure might have been brought to bear in respect of the refund of the money.

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* Sultan's letter, dated November 2nd, 1804.

† Sultan's letter, A. H. 1266.

APPENDIX B.

TREATMENT OF WRECKS.

Treatment of wrecks.

GRAVE doubts were formerly—and, perhaps, by superficial inquirers are still,—entertained regarding the humane conduct displayed by the Máldive Islanders towards persons shipwrecked on their Atols. These doubts have had their origin in the vague rumours ever and anon wafted across from this *Ultima Thule*, caught up, and naturally exaggerated by a confiding public, ever ready to be deceived, whilst indisposed to sift out the truth.

Lieutenants Christopher and Young were perhaps the first to combat the popular notion, and to show that the too prevalent suspicion was generally unfounded. It is curious, however, that they should have contented themselves with deciding that the credibility of the evidence regarding the treatment of a wreck which had occurred more than forty years previously was in favour of the Islanders, instead of citing more recent cases, of which they must have been fully cognizant, *e.g.*, the "Hayston" (1819), "Adonis" (1835), and "Vicissitude" (1836), in confirmation of the opinion they had formed.

Testimony of Lieuts. Christopher and Young.

"During the early part of our residence we did indeed hear of certain transactions which, if true, would have stamped with deceit and treachery the character of these Islanders; but subsequent observations induced us to attach little credit to the reports in question. We allude to certain reports of the crews of wrecked vessels alleged to have suffered inhumane treatment at the hands of the natives; but the statements of those individuals who were said to have witnessed the facts, when questioned by us, marked as they were with consistency and with every appearance of truth, greatly strengthened our suspicions of the incorrectness of the accounts which had reached us.....It is not at all improbable that traders visiting Malé, hearing some accounts of shipwrecks, or seeing in the possession of the natives articles which, not being usually imported, could only have been acquired from vessels driven amongst the Islands; observing also the backwardness of the natives to answer inquiries respecting those matters, and attributing this to a desire to conceal the facts, though they are equally incommunicative on every subject relating to the affairs of the Islands,—it is, we think, not unlikely that under such circumstances the traders would, out of such questionable materials, conjure up tales of murder and bloodshed which had no foundation in fact.

"We ourselves were at first inclined to credit some of the reports of this nature which we heard, and Lieutenant Young considered it his duty to address the Superintendent of the Indian Navy to make known to him what we had heard respecting one particular case, in which a vessel driven on shore on Malé was stated to have been plundered by the natives, who, it was alleged, murdered the crew, and found much treasure on board. We were led to doubt the truth of the statement from a conversation we had with a native of Chittagong who had been 35 years an exile in the Suadiva Attol, whither he had been banished for having purchased stolen goods. On the accession of the present Sultan [M. 'Imád-ud-dín], he, with many others, was released from the operation of his sentence and permitted to return. When the abovementioned wreck occurred he was resident trader at Malé, and some of the particulars relating to it he had from the native portion of the crew.....As our informant, who stood a close cross-examination, was consistent in his account, and had apparently no motive for deceiving us or concealing the truth, his statement appears more entitled to credit than the other version of the story, resting, as it does, merely on vague reports."*

The experience of a further half century, though in the main of a negative character, has done much to strengthen public confidence in the character of the Máldivians. That it is not fully assured can only be due to ignorance of the circumstances attending the many wrecks among the Atols.

Wrecks.

Appended is a rough list of wrecks which have occured on the Máldives between 1797 and 1880.

In three cases only—the "Tranquebar" (1797), the "St. Clair" (1851), and the S.S. "Sea Gull" (1879)—have charges of misconduct been made against the Máldivians.

As regards the "Tranquebar," from the account given in the correspondence with the Madras Government by Mr. Fisher, one of the owners of the vessel, there are, unfortunately, good grounds for believing that in this instance the Islanders cannot be acquitted of nefarious action.

* Transactions, Bombay Geographical Society, 1836-8 (Reprint 1844), pp. 64-5.

THE MÁLDIVES.

APPENDIX B.

"Tranquebar," 1797.

The "Tranquebar," freighted with piece goods for Colombo by her owners, Captain Overend and Mr. Fisher, was driven by stress of weather to the Máldives in January, 1797. On the 29th they fell in with one of the lesser islands. "At 10 o'clock a boat from the shore came alongside the vessel, and the crew were desired to shew good and safe anchorage, which they promised to do; but, after a great deal of evasion, having got the vessel into a critical situation, they suddenly left her and returned to the shore." Capt. Overend had to come to anchor in 60 fathoms, and proceeded on shore to procure assistance from the Chief of the Island, "who readily promised his aid, but delayed the fulfilment so long that the vessel stranded, and three or four boats were instantly perceived going off to her." The Master and part of the crew then swam on board to prevent pillage, and to save the cargo, "which could easily have been effected, as the vessel lay in five feet water." ..... "The Master had scarcely got up the side when he was knocked overboard by the Islanders, who declared that he should not meddle with anything, and that they would save the cargo, and would make a report to their King, and if it pleased him to restore the property they should have it." The Islanders proceeded to remove the cargo as well as the lead of the vessel, and helped themselves to several pieces from the bales. The crew were sent to another Island "that they might not see how much of the cargo was saved," and subsequently to Sultan's Island (Málé). Frequent demands made to "the Second of the Island" for the restitution of property were met by the evasive reply that very little was saved; but upon a threat of complaint to the Madras Government the Chief became more friendly, and promised to have all the cargo that was saved brought to Málé. "Fifteen days elapsed, but no cargo appeared," and the Master, being struck down with violent fever, was then taken off by an English ship. Captain Overend died at the Máldives.*

Sir F. North forwarded a translation of the whole correspondence to the reigning Sultan (M. M'uín-ud-dín), remarking:—"Had Your Highness at that time commenced Your auspicious reign, an act of such outrageous and unwarrantable violence would not have happened; and I am confident that Your justice will induce You to make ample reparation for an event so contrary to the hospitality which a friendly nation has a right to find in Your dominions, and so incompatible with those sentiments of friendship and goodwill which Your Highness possesses towards the ships and subjects of Great Britain."†

It has already been stated (*V. s.*, p. 35) that the Sultan's reply was considered satisfactory; but as the complaint was not instituted for more than three years, and in the interval a new Sultan had succeeded to the throne, it could not have been difficult to fabricate some plausible explanation. The only reparation Mr. Fisher obtained was by the sale of a very small portion of the wrecked goods which had found their way to Ceylon.

For the conduct of the Islanders, outrageous as it was, it is still possible to find some extenuation so far as regards the claim asserted to the vessel after she became a wreck. By Máldive law or long-standing custom, all wrecks are strictly held to be the property of the Sultan—a custom mentioned by Pyrard‡, and formerly ruling in other sea-board States of India, *e.g.*, Kálastri Sáwantwári, &c. By different Treaties with the East India Company, these Indian Princes consented to waive their right to wrecks; but it should be remembered that no such agreement has ever been contracted with the Máldive Sultans. Indeed, it is rather a matter for wonder that, thus untrammelled, the Sultans have never preferred claim to salvage for the recovery of the cargoes from the wrecks which have occurred in their dominions.

From the mention of "the Second of the Island," it is not unlikely that the Sultan (Hasan Núr-ud-dín) was at the time absent on the pilgrimage to Mekka which terminated his life, and that the knowledge of this fact induced his subjects to be less scrupulous than usual about appropriating property chance had offered.

"St. Clair" 1851.

The "St. Clair" is the second doubtful case. The Indian Government received on the 16th April, 1851, a letter from the Máldive Sultan to this effect:—"On the 10th February, 1851, Captain Tierney and twenty-seven men of the "St. Clair," which was destroyed by fire in longitude 74° and latitude 7° 48′, came to My Island of *Mahal* in four boats. When I saw the condition to which they had been reduced I had them landed and showed them great kindness—that is, I gave them a house to live in and supplied them with provisions. They lived with Us for a few days, and I intended to send them in My boats which annually go to Your ports. Meanwhile, they made arrangements with a Gooncha (vessel) by name 'Pudarut', belonging to Ibrahimjee, and asked Me for permission to embark. As the vessel was to sail before any other, I gave them permission, and

* Attested statement made at Colombo by J. H. Thuring, Commander of the "Tranquebar."

† Governor's letter, dated December 8th, 1800. ‡ Pyrard, pp. 163, 211.

the Captain and thirteen of his men embarked on board the 'Pudarut.' The remaining fourteen men embarked on board the Gooncha 'Lukmepursad,' Nakhooda Kara, and took with them such of the articles as were saved from the wreck. They have all left this place. The Captain was satisfied with Me, and I with him. If it pleases God they will arrive safe at Your port."*

A reference through the Chamber of Commerce at Bombay to the Captain of the "St. Clair" regarding the nature of the treatment received by himself and the crew during their stay at the Máldives drew from the Captain the following complaint :—

"I beg leave to inform you that I did not receive at the Máldives the kindness the Sultan mentions in his letter. I was not supplied with any provisions except the following, viz., one bag of rice, a few cocoanuts, 20 lbs. sugar, and 4 ounces tea..... We got a house to live in. It is my firm belief they would have treated us harshly if it were not for the dread of the British Government in India. The Sultan did not offer to provide the crew and me a passage to India, nor did I express my satisfaction at the treatment we received. ..... I complied with all their rules and regulations, and was in every way submissive to the authorities as became an Englishman and a gentleman. I had a good crew, and the best of order and regularity was preserved among them. I acquainted the Ibondagaree [Hadégiri], Collector of Customs, who is the principal man under the Sultan, by letter that the men would require a little fresh provisions, they having been so long living on salt, but my letter was taken no notice of. I wrote then to the Sultan, but it met with the same treatment. I had to provide provisions in the best manner I could, by exchanging one of the boats to a Chittagong trader for some rice, tea, and sugar.

"I made the authorities to understand that in our Sailing (Horsburgh's) Directory, Captain Moresby spoke of their hospitality to strangers, and the British Government were of that opinion. I must say that the Islanders of the other Atolls—viz., Tilla Dou Medowmatta [Tiladummatí], Milla Don Madow [Miladummadulu], Phaideepholo [Fádiffolu]—that I passed through were more civil, they were very courteous, and I found them honest.

"The Sultan detained the pattimars 3 days after they were ready for sailing, by not giving the sailing orders or allowing a pilot, and for what reason I could never learn."†

Upon the correspondence being referred to the Ceylon Government, a strong letter was addressed to the Sultan by Sir Charles McCarthy, detailing the subjects of complaint, and concluding as follows :—"All nations in community act with great consideration and kindness to shipwrecked mariners. I therefore trust You will also order Your people that this kindness may never fail on such occasions, by which friendship will be maintained between Your Highness and the British nation to the great advantage of all concerned."‡

The Sultan replied the ensuing year :—"The letter which was sent Us by Your Excellency has been received and perused by Us ; and as We learn from the contents thereof that certain shipwrecked mariners, unknown to Us, had preferred a complaint, We beg to acquaint Your Excellency that some seamen from a wrecked ship came to Us, and We furnished them with lodgings and supplies of such articles of food as We have here."

"It has been usual with Us to find passage for persons in that situation to take them to some British territory where they could conveniently be sent to, provided the weather is favourable ; but on the particular occasion alluded to it was not practicable for Us to do so, as the weather was contrary, and Our Dhonies (which are small, and tackled with slender ropes) could not venture to sea.....If under such circumstances they will have no patience, it is not right.....Permission was granted by Us when applied for by the traders, &c., to proceed on their journey."§

The explanation was forwarded to the Indian Government, and the matter ended.

No one acquainted with the ordinary supplies obtainable at the Máldives would feel surprized at strangers imagining themselves somewhat stinted with the provisions dealt out to them; but, on the contrary, would learn with considerable astonishment that they had been indulged with such rare and expensive luxuries as tea and sugar. Perhaps the true explanation of the curtailed supply of provisions may be found in the Captain's own admission that he possessed the means of purchasing them.

Regarding the detention of the "pattimars," delay in issuing sailing orders is an established, though doubtless unpleasant, custom, still in force at Múlé, owing to tedious preliminary formalities to which Europeans and natives alike have to submit.

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* Substance of Sultan's letter to the Governor of Bombay, received April, 1851.

† Letter to Chamber of Commerce, Bombay. ‡ Governor's letter, dated 30th July, 1851.

§ Sultan's reply, A. H. 1268.

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After all, the asserted "misconduct" was rather an omission on the sole part of the authorities at Málé, for the Captain had no fault to find with the Islanders generally.

S.S. "Sea-Gull," 1879.

3. It is not necessary to do more than just refer to the recent charge of alleged assault and petty larceny by the inhabitants of Gáfaru Island (North Málé Atol) in connection with operations for the recovery of the cargo from the wreck of the S.S. "Sea-Gull" (1879), as the complaint, though referred to the Sultan at the time, was considered too trivial to be pressed.

The first two cases have been dwelt on in some detail designedly, in order not to hide in any degree the full extent of the alleged misdoings of the Máldivians.

Turning now to the evidence in favour of the Islanders, it is satisfactory to find that there is 'enough and to spare' to convince every impartial inquirer that their professed humanity is "not a myth, but a sober and pleasing reality."

Several cases of substantial aid rendered to vessels wrecked on the Atols in the 17th and 18th centuries have been briefly noted in glancing at Máldive history (*V. s.* pp. 31, 35, 37.)† It will suffice to confine investigation to the present century.

"Europa," 1812.

Referring to the wreck of the "Europa" (*V. s.* pp. 35, 36, 47, 48) Sir R. Brownrigg wrote in January, 1815:—"The wreck of a vessel off the coast of this Island in the month of October last, belonging to some subjects of Your Highness, gave me an opportunity of again testifying my sense of the kindness afforded by Your Highness to the crew of the British ship 'Europa,' wrecked on the Maldive Islands in the year 1812.‡"

1817.

Again in 1817 the Sultan was presented with nineteen bales of cinnamon, the cargo of a Galle dhoney which had been wrecked on the Islands, in acknowledgment of his "humanity and care".§

"Hayston," 1819.

In 1819 the Governor writes, with reference to the wreck of the "Hayston":—"I have had with great satisfaction the letter which Your Highness's messenger, who lately arrived at Galle, brought to the Collector of that District, containing the particulars of the loss of an English ship off the Maldive Islands, and of the humane treatment the officer, passengers, and crew who were so fortunate as to survive the wreck, received from Your Highness during the period of their detention within Your dominions. The vessel in which they were despatched to Ceylon arrived in safety.....I am most happy to learn that the conduct of the unfortunate sufferers gave Your Highness so much satisfaction while they remained under Your protection, and thereby rendered themselves worthy of the kind and benevolent care Your Highness was pleased to take of them."‖

"Adonis," "Vicissitude," 1835, 1836.

For "the humane and liberal conduct" of the Máldivians towards the Commander, officers and crew of the "Adonis" (1835) and "Vicissitude" (1836), the Sultan received the thanks of the Government of India. Presents were accepted as a mark of friendship, but all payment was declined, though liberally offered.

"Mac Imroy," 1839, 1842.

Returning to Ceylon. The Right Honourable J. A. Stewart Mackenzie writes, in 1839:—"I cannot lose this opportunity of expressing to Your Highness my thanks for the kind treatment You have afforded to the Captain and the crew of the British ship 'Mac Imroy,' lately wrecked on one of the isles of Your dominions, and for the aid You have bestowed for their safe conveyance to Ceylon by lending one of Your Highness's vessels for that purpose.¶

1842.

Three years later (1842) a native vessel belonging to a "Pakeer Tamby" struck on one of the Máldive reefs and "was completely wrecked." The Sultan "caused every needful assistance to be rendered to the crew," and finally sent them back to Colombo in a hired vessel, "paying their passage money." This good service was duly acknowledged by Governor Campbell.**

Prazer e Allegria," 1844.

The Sultan's kindly treatment, in 1844, of the passengers and crew of the Portuguese transport, "Prazer e Allegria," has already been referred to (*V. s.* 37.)

"Paramatta," 1855.

In 1855 the Sultan sent over to Ceylon the shipwrecked crew of the "Paramatta," which was "wrecked and foundered opposite the shores of Attumatty Island" [?Haddumatí Atol.] "They

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* *V. s.*, p. 38. † See, too, Stephen's Faria-y-Sousa, Vol. III., Pt. IV., chap. XI., p. 397, of the shipwreck of D. George de Almeyda on the Máldives in A.D. 1631:—"The King of the Islands wrote to D. George condoling his misfortune and sending him a parcel of rice."

‡ In the Asiatic Annual Register, 1801, is reported the wreck on the Máldives of a thirty-five ton vessel, with between 20 and 30 Europeans on board, when bound to Colombo:—"Capt. Meik expresses himself in the highest terms of the attention shown to him, his officers and crew by the inhabitants during their stay."

§ Governor's letter, dated November 8th, 1817.

‖ Sultan's letter (translation dated August 26th, 1819):—"So good a man as this Captain did never come to Our country." Governor's reply, dated September 6th, 1819. ¶ Governor's letter, dated December 19th, 1839.

** Sultan's letter, dated Muharram, A.H. 1259. Governor's reply, dated December 7th, 1842.

were in all eleven persons," writes the Sultan, "of whom five have since died. They were accommodated with lodging and victuals, and the Captain and Pilot treated with special honors by Us. We offered to embark them in Our own vessel; but the Captain declined it, and desired that We should order a vessel belonging to some of Our subjects, and We complied with his desire. We afterwards provided them with their travelling expenses, and have also sent Our own pilot to accompany them as Our Agent with instructions to see those people safely conveyed to where Your Excellency is. May God grant his favour."* In acknowledging the Sultan's letter and returning "cordial thanks" for the assistance he had rendered, Sir C. J. McCarthy added:—"It has afforded me much pleasure to learn from the master of the vessel that he had met with such kind and hospitable treatment in Your Highness's dominions, and I shall be happy to reciprocate Your good offices whenever it lies in my power."†

'Spirit," 1856.

The following year the "Spirit" was wrecked on Suvádiva Atol. The Captain and crew were treated with similar kindness by the Sultan:—"We felt it Our duty to render them every assistance by procuring for them lodgings and maintenance, and to show every mark of respect due to such persons. We subsequently despatched the Captain and three of his men, Nagoda Ali and the rest by another vessel of Our own."‡ "In returning My sincere thanks for those good offices on the part of Your Highness," writes Sir Henry Ward, "I feel it right to acknowledge with equal thankfulness the kindly and liberal spirit in which the duties of good neighbourhood have always been discharged by You."‡

1873.

The year 1873 witnessed four wrecks on the Máldives, of which two were French vessels—the "François" and the "L'Ecureuil." The crews were hospitably entertained and provided with free passages to Ceylon. As the Sultan had twice acted so well towards French subjects, it was almost decided to communicate an account of his good deeds to the French Government. Sir William Gregory did not fail to express to the Sultan his deep sense of these satisfactory marks of good feeling and friendship.§

There is no need to adduce additional evidence in support of what—to those who cared to acquaint themselves with the facts—must almost from the outset have been a foregone conclusion.

The Máldivians may lay claim to the proud distinction of being probably the only race similarly situated on the face of the globe who have not required to be taught by special contract, or legal enactment, the duty they owe their fellow men who have fallen into "troubles by shipwreck" on their "tempest-haunted" Atols.

Homines ad deos nullâ re proprius accedunt quam salutem hominibus dando.

Nothing is more certain, however, than that, had the Máldives come within the influence of the English East India Company, the Sultans would have been bound down long ago to a Treaty clearly defining the action expected from them in cases of wrecks. Hardly a compact entered into with any Oriental Potentate, whose dominions bordered the sea, but contained an express clause stipulating for aid to wrecks—coupled, in most cases, with a provision for the relinquishment of any claim thereto.

These covenants were of two main descriptions:—

1. Agreements binding one party only, providing for assistance to wrecks and their abandonment to the claimants.

   (*a*) Unconditionally, *e. g.*, Turkey (1661-2), Kálastri (1760), Persia (1763), Muskat (1798), Joasmí (1806), Aramra and Bét (1807), Dingi (1807), Pusitra (1807), Junágarh (1808), Purbandar (1808), Kolhápur (1812), Kachch (1816), Muskat (with America, 1846).

   (*b*) Conditional, on payment of reasonable expenses, *e.g.*, Kartinad (1761), Bushire (1763), Peshwá (1775), Broach (1785).

2. Reciprocal agreements, requiring aid and the restoration of wrecks.

   (*a*) Unconditionally, *e. g.*, Sáwantwári (1730), Jafarábád (1761), Muskat (with England, 1839; with France, 1846).

   (*b*) Conditional,

      (i) On payment of reasonable expenses, *e.g.*, Sáwantwári (1765, 1766), Peshwá (1776), Portugal (salvage, &c., 1842).

      (ii) On equal division of cargo, *e. g.*, Peshwá (1839).

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* Sultan's letter, dated A.H. 1271. † Governor's reply, dated March 29th, 1855.

‡ Sultan's letter, dated October, A.H. 1273. Governor's reply, dated November 27th, 1856.

§ Governor's letters, dated August 5th and December 9th, 1873.

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APPENDIX B.

That these Treaties have had a wholesome effect will hardly be disputed; and, fairly as the tacit understanding with the Sultans has proved to have worked, it may reasonably be doubted whether the time has not arrived for a closer and more defined compact drawn on the lines of some of the above agreements.

Nothing could be clearer or better meet the case than the reciprocal provisions of Article XIV., paragraph 3, of the "Treaty of Commerce and Navigation" between Great Britain and Portugal dated 3rd July, 1842 :—

"If any ships of war, or merchant vessels, should be wrecked on the coasts of either of the high contracting parties, such ships or vessels, or any parts thereof, and all furniture and appurtenances belonging thereunto, and all goods and merchandise which shall be saved therefrom, or the produce thereof, if sold, shall be faithfully restored to the proprietors upon being duly claimed by them, or by their Agents duly authorized; or if there are no such proprietors or Agents on the spot, by the respective Consuls of the nations to which the properties of the said ships, vessels, or goods may belong, and in whose districts such wrecks may have taken place, provided such claim be preferred within a year and a day from the time of such wreck; and such Consul, proprietor, or Agent shall pay only the expenses incurred in the preservation of the property, together with the rate of salvage which would have been payable in the like case of a wreck of a national vessel; and the goods and merchandise saved from the wreck shall not be subject to duties unless cleared for local consumption."

Considering that the Máldives lie in the direct track of vessels bound to the East—the number of which has enormously increased of late years, and is certain to grow with the spread of civilisation and trade in the many new fields now opening out to European enterprize—and the weighty interests involved in the assurance of safety to life and property in the event of disaster on these treacherous Atols, it becomes the bounden duty of this Government to use all means in its power in order to induce a more general feeling of security.

Since 1867 alone (when the Board of Trade first commenced a systematic registry of these casualties) 13 wrecks have occurred on the Máldive group, or an average of one every year.

It is still thought by the Máldivians that after the occurrence of a wreck the Captain has lost all right to his goods and cargo. "When the 'Liffey' was wrecked on Nilandu Atoll in August last year [1877], the people would in no way assist the master to recover any of the cargo. They could not do so without express leave of the Sultan, though they provided boats, pilots, and provisions for the conveyance of the crew to Male."* "This," as Mr. Gray truly remarks, "is hardly a satisfactory state of things," and, it must be confessed, is in great part due to the indifference with which everything connected with the Máldives has hitherto been regarded.

Of the Lakkadive Islanders, Mr. Allen Hume writes, in 1876 :—"They have been accused of plundering wrecks, but I believe the worst that can be said of them is, when they have found abandoned wrecks on the reefs, and useful articles lying about handy, they have very sensibly helped themselves. Considering that no salvage had ever been offered to them, or any inducement held out to them to act otherwise, I think that no great blame attaches to them. They have never been inhospitable or unfriendly to shipwrecked mariners, and now that salvage has been duly offered to them, and the law on this subject explained to them, I do not believe that anything more than petty pilfering, such as goes on to this day on our own English coasts, will be heard of."†

It is useless to wait until the Sultan—meekest of Rulers—puts forward claim for salvage. A demand so presumptuous to Máldive minds will never be made from their powerful and dreaded protectors. It would be both more generous, and in public interests the wiser course, for the offer to emanate from the Ceylon Government.

The Board of Trade has long had in contemplation the erection of a light-house on Minakaï, but year by year 'dies and makes no sign' of its commencement.‡

There are other and more dangerous passages than the "Eight-Degree-Channel"—such as the Karadiva Channel—regularly traversed at certain seasons, which must sooner or later engage attention.

Whilst Káukésanturai and the Paumben Channel remains without even a fourth-class light, it is hardly to be expected that this Colony will consider the wants of her Dependency. But something might possibly be done towards minimising—by day at least—the difficulties of navigation through the intricacies of the Máldive Atols by urging upon the Sultan the desirability of causing obelisks, or towers, to be erected as land marks at the entrance of the more frequented passages.

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* J. R. A. S., Vol. X., n.s., 1878, p. 209.

† Stray Feathers, 1876, Vol. IV., p. 441.

‡ This work has since been commenced by the Imperial Government.

List of Wrecks on the Máldive Islands between 1797 and 1880.*

Year.	Month and Day.	Name of Vessel.	Port of Registry.	Description of Vessel, and whether iron, composite, or wood.	Tons.	Crew.	Port sailed from.	Port bound to.	Description of Cargo and Number of Passengers (if any.)	Wind.	No. of lives lost.	Place of Casualty.	Total or partial loss of Vessel
1797 ...	January 29	*Tranquebar* ...	—	—	—	—	—	Colombo ...	Cloth ...	—	—	Near Málé ...	—
1800 ...	—	Native vessel...	—	—	35	—	—	Colombo ...	—	—	13	—	Total
1802 ...	—	*Surat* ...	—	Ship, wood ...	—	—	—	—	—	—	—	SE. by S. Máfurhi Island, Suvádiva Atol	—
1806 ...	—	French vessel..	—	—	—	—	—	—	—	—	—	—	—
1812 ...	May 23	*Europa* ...	—	—	—	29	—	—	Arms and cloth..	—	—	Southern Atols ..	—
1819 ...	—	*Hoyston* ...	—	—	—	—	—	—	Metals, wine, glass, and spices.	—	—	Málé Atol ...	—
1835 ...	July —	*Adonis* ...	—	—	—	—	—	—	—	—	—	Veligadu Island, Kolumadulu Atol.	Total
1836 ...	—	*Vicissitude* ...	—	—	—	—	Mauritius ...	Ceylon ...	—	—	—	Ihavandu-fulu Atol ...	Total
1837 ...	—	*James McInroy*	—	—	—	—	—	—	—	—	—	—	—
1842 ...	—	Native vessel...	Ceylon ...	—	—	—	—	—	—	—	—	—	Total
1844 ...	March 16	*Prazere Alegria.*	Lisbon ...	—	—	—	Lisbon ...	Goa ..	Passengers and Convicts, 104.	—	11	Málaveli Island, Mulaku Atol.	—
1851 ...	February 15	*St. Clair* ...	—	—	—	29	—	—	—	—	—	—	—
1855 ...	—	*Paramatta* ...	—	—	—	11	—	—	—	—	—	Haddummati Atol ..	—
1856 ...	September —	*Spirit* ...	—	—	—	9	—	—	—	—	—	Suvádiva Atol ...	—
1862 ...	November —	*Colombo* ...	—	S. S., iron ...	—	—	London ...	Point-de-Galle	—	—	—	Minakai Island	—
1868 ...	May 29	*Reindeer* ...	Liverpool ...	Ship, composite	965	26	Mauritius ...	Point-de-Galle	Ballast ...	WSW., 7 ...	—	SW. point of Kurumati Island.	Total
" ...	August 19	*Royal Family*	Liverpool ...	Ship, wood ...	1750	34	Aden ...	Callao ...	Ballast ...	NW., 6 ..	—	Ruffurhi Reef, NW of Máldive Islands.	Total
1869† ...	April 17	*Sarah Sands* ...	Liverpool ...	Barque, iron ...	1150	26	Liverpool ...	Bombay ...	Coal ...	—	—	Kálpeni Reef, N. of Máldive Islands.	Total
1872 ...	September 25	*George Reid* ..	Bridgewater ...	S. S., iron ..	115	19	London ...	Galle ..	Ballast ...	— 6 ...	—	SW. barrier reef of Miladummadulu Atol	Total
1873 ...	May 4	*Ægean* ...	Leith ..	S. S., iron ...	836	26	Sourabaya ...	Amsterdam ...	Cotton, tobacco, sugar.	SW., light ..	—	Suvádiva Atol ..	Partial
" ...	June 3	*François* ...	Bordeaux ...	Barque ...	—	22	Bourbon ...	Calcutta ...	—	—	—	Haddummati Atol ..	—
" ...	August 12	*Aracan* ..	Glasgow ...	S. S., iron ...	1174	41	Rangoon ...	London ...	General; Passengers, 9.	W., moderate	—	Gáfaru Island reef, S. of Karadiva Channel.	Total
" ...	" 23	*L'Ecureuil* ...	Bayonne ...	Brig, wood ...	204	10	Buenos Ayres	Singapore ..	Ballast ...	WNW., 8 ..	—	Coral reefs of One and a Half Degree Channel.	Total
1874 ...	November 8	*Adeline* ...	Port Louis ...	Schooner, iron. 3-masted.	145	11	Mauritius ...	Colombo ...	Sugar and empty casks: Passengers, 2.	WSW., strong.	—	Suvádiva Atol .	Total
1877 ...	August 3	*Liffey* ...	London ...	Ship, iron ...	1339	35	Mauritius ...	Calcutta ...	Ballast; Passengers, 3.	Slight ..	—	Entrance of Kuda-Huvadú channel.	Total
1879 ...	" 21	*Sea Gull* ..	Leith ..	S. S., iron ..	1012	32	Calcutta ...	London ...	General; Passengers, 3.	—	—	Gáfaru Island reef ...	Total
" ...	October —	*Clan Alpine* ...	Leith ...	Barque, wood	363	—	Mauritius ...	Bombay ...	Sugar ...	—	—	Gáfaru Island ...	Total
1880 ...	May 7	*Consett* ...	Newcastle ...	S. S., iron ...	1105	28	Bassein ...	Port Said ...	—	—	—	N. E. edge Suvádiva Atol.	Total

* As these wrecks were not regularly recorded by the Board of Trade until 1867, the list is not offered as complete.
† [illegible] Board of Trade, but strictly wrecks on the Lakkadives.